THE CHEMIST AND DRUGGIST

OFFICE,

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For particulars of subscriptions, advertisements, &c., see the centre of the book.

THE MONTH

Specimen copies of our next number (May 15) will be sent to the chief pharmacists of the United States. We shall employ this purpose the list of members of the American Pharmaceutical Association, and supplement it with lists of chemists and druggists specially compiled for us by our various agents re. This occasion is an excellent opportunity for the insertion of advertisements by firms who wish to introduce their cialties or manufactures to the American as to the British le.

It was our desire to present each of our subscribers with a y of the additions to the "Pharmacopœia" lately issued, which we should have produced this month in the form of upplement to THE CHEMIST AND DRUGGIST. But our designs his respect have been frustrated by the Executive Committee the General Medical Council, which "declines to give permission for the proposed reprinting of the Additions to the British armacopœia, recently issued, as such re-publication would an infringement of the copyright vested in the General edical Council by a special Act of Parliament, 25 & 26 Vict. p. 21." It may be convenient, therefore, if we mention that e "Additions" can be obtained from the office of the General dical Council, 32 Soho Square, price ninepence.

The Pharmaceutical Council met on April 1. The minutes the last meeting containing an announcement from the North itish Branch that they had removed to other premises, Mr. illiams asked for a reason for this removal so soon after the evious migration, but Mr. Frazer not being acquainted with e circumstances, and Mr. Mackay not being present, no exanation was forthcoming. The secretary was therefore inructed to make enquiries. A letter was received from Mr. homas Morson in reponse to the letter of condolence addressed the family on the occasion of the death of Mr. T. N. R. orson. Mr. Morson offered to present to the society a portrait oil of his late father, which offer was gratefully accepted. letter was also read from Mr. T. H. Wyatt, architect, offering old engraving of Bloomsbury Square in 1787, showing the ciety's premises, which was also accepted with thanks. Professor Bentley and Dr. Porter Smith were proposed as honorary embers of the society. Reports from the professors showed at there were 30 students attending Professor Bentley's course, whom 13 had also attended the first course, 32 attending at of Professor Redwood, 14 of whom had also attended the st course, and that there had been this session 71 entries for e laboratory, 38 students being now at work. It was resolved print a catalogue of the objects in the museum, with explanary notes drawn up by the curator, to open the museum in the enings, and to purchase a microscope, at a cost of from 10*l.* to *l.*, for use there. A very important discussion occurred in spect to certain suggestions emanating from the London and Edinburgh Boards of Examiners. The point of discussion was simply this. At present a rejected candidate is not allowed to present himself again until after three months have elapsed. The examiners wished to have discretionary power to extend that time to six months. Mr. Williams, who supported this proposal, argued that certain candidates displayed so much ignorance that nothing but cramming could possibly fit them for a reappearance within three months, and he thought that by this means that system of cramming would be broken down; but Messrs. Hampson, Betty, Savage, and Brown spoke strongly against the proposal, and urged that if three months were proved to be an insufficient time a longer period should be definitely fixed. Mr. Brown considered it beneath the dignity of the Council and the profession to talk so much about cramming as they had done. The examiners of the Society were either competent or incompetent to discriminate between those who came up to be examined, and decide who were proper to be entrusted with the responsibility of business. Ultimately the proposal was rejected; Messrs. Hills, Sandford, and Williams alone voting for it. The subject of additional scholarships was again raised, but in consequence of the absence of Messrs. Schacht and Mackay it was postponed.

A history of the old firm of Francis Newbery & Sons, with likenesses of the present proprietors of the business, occupies a position this month in our series of personal sketches.

The Irish druggists seem to be the objects of a special Providence. Just as they had concluded that their efforts to arrange a compromise with the Apothecaries' Company must fail, they are startled to find that the Dublin College of Physicians has taken the matter up, and intends to carry it through Parliament if possible. The Physicians' scheme is to extend the Pharmacy Act to Ireland, and their Bill, if carried, will have the effect of placing the pharmacy of the United Kingdom on one footing.

Mr. Henry Deane, of Clapham, has quickly followed to the grave his old friend Mr. T. N. R. Morson. Mr. Deane died from heart disease, very suddenly, at Dover. The death of Mr. Lea, of Worcester, one of the original compounders of the famous sauce, is also announced.

Political events of the year are as yet in the bud only, though we shall probably soon be in the thick of the fight. The Budget will be expounded on the 16th inst., and, according to the Queen's Speech, we may soon expect some modifications in the Licensing Act, and also some attention to the laws affecting friendly and provident societies. When the latter subject is brought forward it may bring on the carpet, or rather on the floor, of the House the abuse of the Friendly Societies Act which has been committed by the Civil Service Supply Association. Mr. Lopes proposes to amend the Bills of Sale Act, which, as it stands at present, can be readily evaded. The object of that Act was to enforce a public registration of all bills of sale given, for the information of creditors. This registration is ordered to take place within 21 days from the date of the bill of sale. Consequently, by renewing such bills every 20 days, two persons in collusion can easily defraud legitimate creditors and keep within the law at the same time. Mr. Lopes proposes to regulate this. The same gentleman has also introduced an important Juries Bill, which, differing in many respects from that of the late Attorney-General, coincides with it in providing for the exemption of "all registered chemists, if actually practising as such." Mr. Norwood has reintroduced his much-wanted Bill providing for the compulsory registration of all firms; and Sir John Lubbock and Mr. Morley have threatened to re-open their Quixotic and irritating endeavours to promote early closing by penal enactments.

The *Lancet* has spoken out strongly on the apparent illegality of the dispensing of medicines at Co-operative Stores. An article published by us in this number will still further indicate the necessity of some interference in behalf of the Pharmacy Act.

A few of the Scotch chemists have asked for contributions towards the very heavy legal expenses of Mr. Freelnnd, of Bathgate, in a recent action brought against him by a customer. Their reason for submitting this to the trade will be found in an address which we publish.

According to a French medical report, a most wonderful diaphoretic, enjoying the striking name, *Jaborandi*, has been introduced into the Paris hospitals. We give some particulars of it, gathered from an account written by its discoverer, a doctor from Brazil.

We may suppose that the hour has struck for the vanillin plant, as Dr. Hoffman, of Berlin (formerly of London), is said to have produced an exact imitation of its flavour from the cambial juices of certain pines.

The Glasgow inspectors have commenced a crusade against adulterated drugs, beginning with scammony. Two druggists have been fined 20*s*., with 20*s*. expenses, each.

Both in London and Liverpool pharmaceutical criticism has been opened on the additions to the Pharmacopœia. Mr. Umney's very able paper, commenting on the new preparations, will be found worth the study of pharmacists. Dr. Symes, of Liverpool, is much disappointed with the publication. An extra meeting of the Pharmaceutical Society is to be held on May 6, specially to discuss the additions, at which it is expected that Dr. Redwood will reply to some or all of the criticisms.

It is announced that the dinner of pharmacists at the Crystal Palace, which, it seems, is now an annual affair, will be held on May 19, the day before the annual meeting of the Pharmaceutical Society.

THE MESSRS. NEWBERY.

THE celestial democrats introduced by the poet laureate in his apostrophe to Lady Clara Vere, who "From yon blue heavens above us bent, look down on claims of long descent," have some foundation for their contempt if they regard only such claims as are dependent on the accidents of birth. There is nothing very wonderful in the maintenance of an entailed estate or hereditary title through long generations or centuries; a series of imbeciles can accomplish such a task under the laws of England if they have been fairly started by a brilliant robber or politic courtier. But there is something more, or rather, something quite different, required in maintaining a business or enterprise of any kind for a century or more. It is really remarkable, and suggestive of much moralising, how few businesses, wholesale or retail, in any line, can hang out the proud boast "Established 100 years." And even of those which are so distinguished, the majority have passed away from the lineal descendants of their first proprietors. This fact is the more singular because we always suppose that the early years of a business are the most dangerous to its vitality, and that its security increases in the ratio of its age. Figures would seem to show that it is easier to kill a business than to start one, a danger which proprietors of old concerns may take note of to advantage.

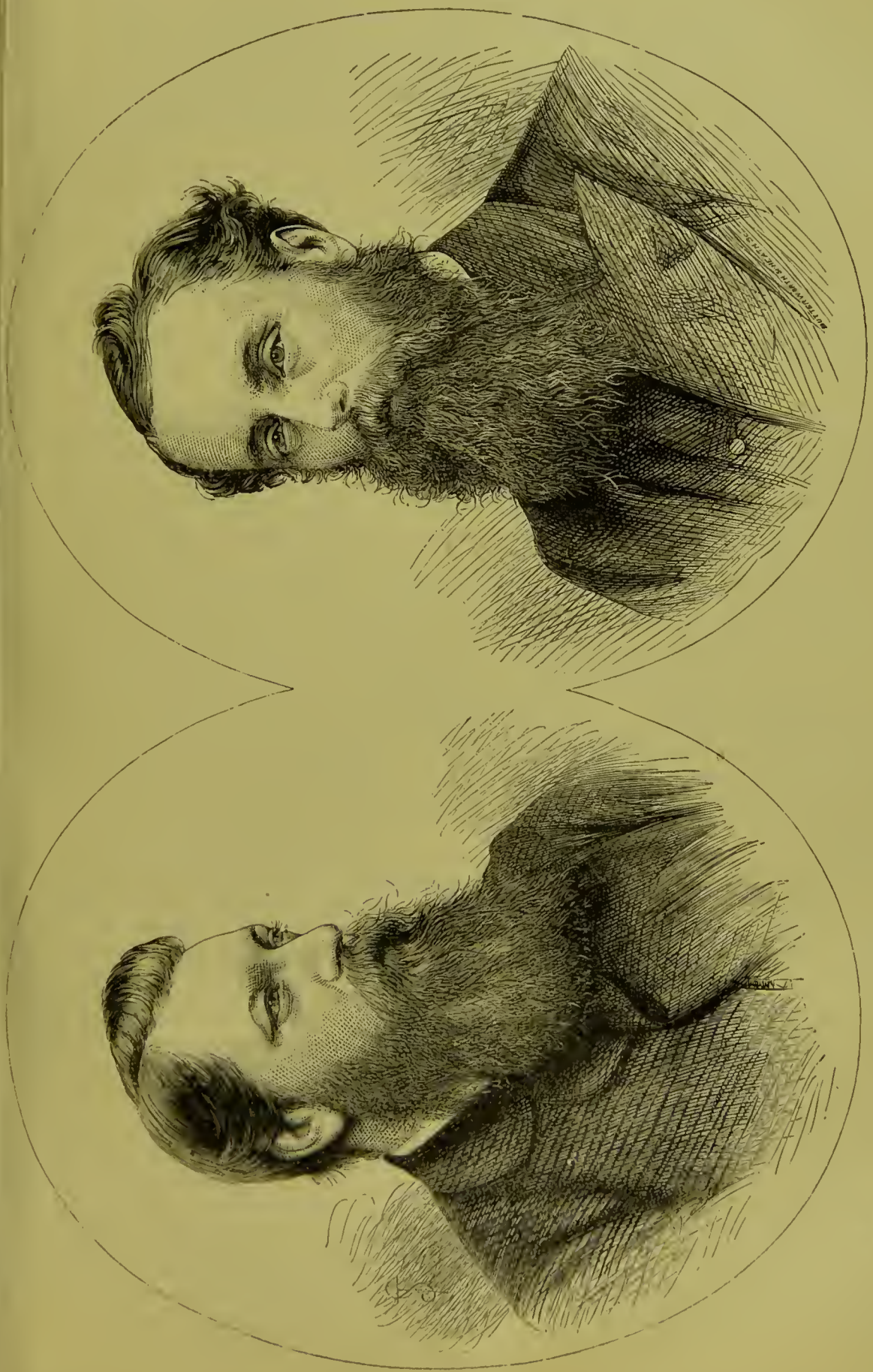
Messrs. Arthur and Lionel Newbery, whose *cartes-de-visite* we have now the pleasure of including in our collection, are the present representatives of, perhaps, the oldest British firm directly connected with medicine which has been retained in a single family. The history of this house extends over four generations, and reaches back to about the year 1737, and this history is not only that of a vigorous and successful business, but it is also linked in a peculiarly interesting manner with some of the most famous *literati* of the last century, so that the brief sketch of its records which we are able to present is likely to be somewhat more discursive than if it were limited within the circle of medicine exclusively.

The family of the Newberys was of some position in the county of Berkshire, for we find that in the year 1608 one Ralph Newbery left some property for the benefit of the poor of Waltham St. Lawrence, where he resided. The property realises at the present day 45*l*. per annum.

John Newbery, the founder of the firm and the great grandfather of the present proprietors, was the younger son of a Berkshire farmer residing at Lawrence St. Waltham, near Reading. He was born in the year 1713. A village school supplied his curriculum of education, the deficiencies of which, however, he must himself have very considerably supplied, as will be judged by his later career and connections. Turning his back on agricultural pursuits, he got into an office at Reading, and a few years later married a widow lady who owned a book-selling business and one of the earliest provincial papers in England, the *Reading Mercury and Oxford Gazette*. Three or four years afterwards he opened a business in London, establishing himself at the corner of St. Paul's Churchyard and Ludgate Hill, and commenced by publishing children's books, for which he became quite famous. "Goody Two-Shoes," "The Philosopher of Tops and Balls," and "The Renowned History of Giles Gingerbread," were among his early triumphs. These books, many of which were written by himself, took the nurseries by storm. They were pure, genuine, imaginative legends, with no deceitful undercurrent of "instruction combined with amusement." There was no mean attempt to insinuate moral or scientific theories into them under flimsy, fabulous disguises, such as childrens' writers of this age think they adopt so cleverly, but into which the guileless eye of babyhood sees with intuitive perception and quiet disdain. Anyway, that generation gave them a hearty welcome. The publishing business and his strong literary taste brought John Newbery into contact with Dr. Johnson, and the acquaintance ripened into a firm and fast friendship which lasted till the death of the former. Johnson had another friend, a physician with a large and fashionable practice, Dr. Robert James, who appears to have been cordial, impetuous, improvident, but thoroughly well loved by his associates; a man who might easily have been rich, and who was certainly industrious and learned, for he has left behind him, among other works, a massive Dictionary of Medicine in three folio volumes, the production of which would be an immense task even in these days, when writing books has become such a much more usual accomplishment than it was one hundred and twenty-five years ago, when these were printed. Through Dr. Johnson Mr. Newbery became acquainted with Dr. James, and when the latter invented his famous Fever Powder, Newbery became part proprietor of the remedy and introduced it commercially. This was the introduction of the firm to the medicine business, which ultimately became so important, mainly through the immense success of James' Powder, that the book trade was gradually pushed aside. A little later (1761) we find a document which shows that John Newbery had agreed with Robert Raikes for half the share of another nostrum, Bateman's Pectoral Drops, which originally belonged to the family of the latter. Robert Raikes afterwards won a deathless fame as the founder of Sunday Schools. John Newbery's son, Francis, whose history we shall come to presently, married a lady of the same family. The Reading concern, which had been carried on by Newbery simultaneously with the London business, was

The Chemist and Druggist Portrait Gallery.

VIII.



THE MESSRS. NEWBERY.

t this time, but the complete severance of medicine and ature did not occur during John Newbery's life. His t, indeed, still lives in the atmosphere of books, for rs. Griffith and Farran carry on a publishing business he same spot where he established himself, and they announce themselves as "successors to Newbery & Harris." me of Dr. Johnson's works were published by John New- especially certain of his essays collected under the title of e Idler." One of these essays presents a portrait, or rather ricature, of his friend Newbery in the humorous character ack Whirler. But the most notable works published by bery were those of Dr. Oliver Goldsmith. Washington ng thinks that Goldsmith was the author of some of the ody Two-shoes" series; but he does not give much reason his belief. Twenty guineas was the sum paid by Mr. bery for "The Traveller," a work in which, however, he s to have had but little confidence, for it lay in his desk years before it was put into type. For the "Vicar of efield" he gave 60*l.*, a sum which, even after the first n of its success, Dr. Johnson pronounced to be "no mean ." Irving, in his "Life of Goldsmith," seems to blame Newbery for not having anticipated the verdict of posterity gard to these works; but, as a matter of fact, he might given all his substance for the "Vicar of Wakefield," and then have failed to buy it at its true value. Johnson's mony is of far greater value than Irving's as to the value e work *in manuscript*. The fact is, Mr. Newbery was well n among his literary associates both as a shrewd man of ess and as a kind-hearted and most valuable friend. smith himself has sketched his portrait in the "Vicar of efield," where he appears as the good-natured man with the pimpled face, who was no sooner alighted but he was in to be gone, "for he was ever on business of the utmost rtance, and he was at that time actually compiling mate- for the history of Mr. Thomas Trip." Many times we find lending money to Johnson; at another time he rescues lett from the King's Bench Prison, and the 60*l.* he paid he "Vicar of Wakefield" was the means of liberating smith from the arrest of his landlady. Let any modern ess man try to conceive the trials of temper he must suffer with such an impecunious brotherhood.]

hn Newbery died in 1767, at the age of fifty-four. His only son, Francis, was at Cambridge preparing himself in a iently leisurely manner for the medical profession.

n the death of his father, Francis Newbery had to decide her he would continue his studies or throw his whole energies the business of which he now found himself sole proprie-

He consulted his father's most intimate friends—Dr. son and Dr. James—who strongly urged him to take the inty in preference to the uncertainty, to relinquish the pro- on for the shop. This course, therefore, he decided on, and few years realised a very handsome fortune. The immense larity of Dr. James' Fever Powder contributed in no small e to this success, and we may here digress for a few lines ive a short account of the history of this notable dy.

e inventor has been already alluded to. He was a noted ician, a genial companion, extremely fond of a good dinner, orious author, and an amateur chemical experimentalist. pecifications of his several patents indicate, too, that he n accomplished adept in the art of using language which d conceal his ideas. "The powder," he says, "is prepared lcining antimony by long-continued heat in an unglazed en vessel, adding to it from time to time any animal d salt. The compound is then boiled in melted nitre, he powder is subsequently obtained by dissolving the nitre tor." The definiteness of the instructions to use an *unglazed* en vessel, occurring in the midst of the vague confusion of the rest of the process, is a touch which betrays the master-hand. Long before Dr. James' death, which occurred in 1776, the powder had acquired great fame, and imitations were abundant. From a private narrative, written by Francis Newbery himself, we quote:—"He knew that the enemies of the fever powder would avail themselves of this opportunity to crush it when no longer protected by its inventor, under the pretence that his successors were unskilled and unequal to the preparation. A large quantity, therefore, a magazine, had been previously provided, sufficient to supply the consumption for many years; and this fact having been announced to the public, the design was precluded." A man named Hawes, too, who had once been employed by Dr. James, had commenced to prepare an imitation of the powder, professing to be acquainted with the true method. Dr. James therefore left behind him an affidavit directed against this opponent's pretensions. On the death of Dr. James, Hawes proclaimed that when he had signed that affidavit the doctor was not in possession of his mental faculties, to which Mr. Newbery replied by further affidavits from many of Dr. James' patients and acquaintances. The interesting point of this controversy is that the tail-piece to Mr. Newbery's advertisement on this occasion was written by Dr. Johnson, a style of literature probably new to the great lexicographer and therefore worthy of reproduction. His composition ran thus:—

"The public will now be fully enabled to judge of Mr. Hawes' pretensions to the knowledge of this medicine; and they will determine what degree of credit they ought to pay to the assertions of a man who has made so daring an attempt to impose upon their understanding; who, in contradiction to Dr. James' deposition, has represented himself as possessing a secret with which he was never entrusted, and as having performed operations at which he was never present; and who, to invalidate the Doctor's testimony, has declared him to be reduced to fatuity at a time when the vigour of his mind was known and acknowledged by the physician and surgeon who attended him, and by patients of the highest rank who continued to entrust him with health and life."

The first official attempt to imitate this powder was made for the Apothecaries' Company by a certain Dr. Higgins, and his production was introduced into the Pharmacopœia of 1788 avowedly as a representative of Dr. James' preparation. Some medical controversy ensued as to the identity of the two preparations, but it was at length acknowledged by the College of Physicians themselves that the imitation had proved neither so mild nor so certain as the original preparation, and in their next Pharmacopœia they prescribed only half the original proportion of antimony. The medicine and its imitation still exist side by side, but the absence of exact correspondence in their effects is no longer in dispute. *Pulvis Jacobi Vera* is one of the few remedies which has braved a hundred years, and it shows no indications of dying out yet, large quantities being periodically ordered as Government supplies.

Francis Newbery was not only a shrewd man of business, but also a gentleman of cultivated tastes, acquired in the course of a liberal education both at Oxford and Cambridge. His University career, too, had developed in him a strong passion for hunting, to which he afterwards added shooting; and a good story is told relative to his enthusiasm in this respect. A select company of Shakespearian admirers hold a series of meetings at the Shakespeare Tavern for the purpose of encouraging Alderman Boydell in the production of a grand edition of the poet's dramas. Francis Newbery was one of this group, but one evening his place was vacant. Enquiry was made about him, when one of the party who had more hesitation in speech than in wit seriously informed the others, "that his friend Newbery had heard of a woo-woo-woodcock in Sussex and had taken a postchaise and four and gone after it." Sir Joshua Reynolds was struck with the story, and at the next meeting asked the object of the joke, in all simplicity, "if it was true."

Mr. Newbery had already removed his business from the west to the north side of St. Paul's Churchyard, on the spot now occupied by the Religious Tract Society. In 1779 he removed once more to the east side, where he went with his family to reside. He records in his papers a grand house-warming held soon after his removal, at which Dr. Johnson was one of the guests, and was, he says, "in high good humour, and rendered himself extremely agreeable to the company."

Riches increased, and Mr. Newbery's strong inclinations towards a country life increased also; therefore, a few years later we find him the purchaser of Heathfield Park, one of the most beautiful estates in Sussex. Here he built a tall stone tower, which still exists, as a memorial to the late owner of the estate, Lord Heathfield, who, as General Augustus Elliott, had so eminently distinguished himself as the commander of the fortress of Gibraltar during the great siege by the united forces of France and Spain. He had scarcely settled in his new home when he was urged by various sections of the citizens of London to become a candidate for the representation of the City in Parliament. He had every prospect of securing the honour, but after some little hesitation declined it on the ground that the fulfilment of the duties incident to the position would occupy more time than he could afford to give. In the year 1795, however, he was appointed High Sheriff of Sussex, and it happened that during his year of office he had an opportunity of displaying somewhat prominently his promptitude and energy. The price of bread had roused no little discontent among the lower classes, and the triumph of the people in the French revolution was a dangerous example. There were many indications of disaffection, and the privates of the Oxfordshire Militia openly mutinied. The mutineers marched on to Newhaven with the object of seizing certain vessels there, one laden with flour, and another with ammunition. It thus fell to the lot of the High Sheriff to face this threatening condition, and he fulfilled his duty, we can use no better simile, like an Englishman. He hastened to Newhaven, appeared in the midst of the soldiers, who were wise enough to refrain from any violence; he took prompt measures which saved the ammunition from falling into their hands; and in a day or two after, by obtaining the assistance of some of the regular troops, the mutiny was completely quelled. Two of the ringleaders were shot, and several others flogged. The sentences were carried out at Goldstone Bottom, near Brighton, where the shepherds still keep the turf cut to mark the positions occupied by the firing party and the condemned men. Francis Newbery was present, accompanied by his eldest son, John.

Towards the end of last century Francis Newbery established a branch business in Dame Street, Dublin, the management of which was entrusted to his son Thomas; but during the interval of "quietus" which ensued, this establishment was abandoned.

Francis Newbery died in 1818, at the age of 75, and was succeeded in the business by his eldest son, John, the father of the present proprietors. John Newbery, who had been educated at Cambridge, took but little interest in commercial concerns. He held a commission in the Sussex Militia, to the colonelcy of which he ultimately rose, in the room of the Duke of Richmond. This was a distinction rarely conferred on a commoner. He held, also, an appointment in the General Post Office, of which his brother-in-law, Sir Francis Freeling, was at that time the Secretary. Occupied with these more congenial engagements, the business in St. Paul's Churchyard was left pretty much to take care of itself, which it seems to have done very creditably under the circumstances. The absence of any severe competition outside necessitated the less enterprise from within; thus, without guidance or energy, the business floated on for a quarter of a century. But the entrance of Colonel Newbery's sons into the concern was the signal of new life. Colonel Newbery was twice married, first to a Miss Mary Cleaver, and secondly to a daughter of Lieut.-Colonel Le Blanc. The present proprietors of the business were the issue of the second marriage. The death of their father, in 1854, left them sole proprietors, and every one knows the spirited and intelligent manner in which they have since developed the resources of the old business which had descended to them. They had travelled widely, and no house in the trade has done so much to open up relations between this and other countries as Messrs. Newbery. Among the pharmaceutical specialists of France and America especially their name and reputation is of the highest; and their establishment in the Rue de Provence, in the centre of Paris, has grown into quite an important concern.

The expansion of their business, the direct result of wisely applied energy, has necessitated several migrations. First, in 1869, they changed their premises at 45 St. Paul's Churchyard to a house double the size next door. In three years this became too strait for their requirements, and they again transplanted their business, this time to Newgate Street, where more spacious premises were soon teeming with hands and stock. A portion of this building is occupied in the manufacture of trusses, chest-protectors, and other surgical appliances.

Messrs. Newbery have always shown a strong desire to serve the interests of the trade by every means in their power. They were among the first to pay down their 100*l.* when the Bottle suits were threatened, and Mr. Lionel Newbery was treasurer of the defence fund in that affair from the death of Mr. Twinberrow until the matter was finally settled a year ago, when the audited account of his stewardship was published in these columns. From first to last, too, they have done all that a wholesale house could do to oppose the encroachments of the Civil Service Stores.

In 1867, not content with the bonds of consanguinity and partnership, Messrs. A. and L. Newbery contracted a third link and became also brothers-in-law. They married on the same day the daughters of Mr. White, of Aylesbury, Bucks, and at this time a fifth generation is rising up to maintain the head of the house. Like their fathers and forefathers, they are also citizens and freemen of the city of London, having been both elected upon the livery of the Goldsmith's Company; they thus maintain the continuous connection of their family for close upon a hundred years with that ancient city guild.

THE LATE HENRY DEANE, F.L.S., OF CLAPHAM.

TO the regret of a large circle of acquaintance, both English and American, this esteemed pharmacist died suddenly at Dover on Saturday morning, April 4. The day before we received a letter from a friend describing Mr. Deane as he stood thoroughly enjoying the big waves and the boisterous weather. Those who know him will fully realise the childish pleasure the man of many summers would be certain to evince.

Mr. Deane, accompanied by his daughter, was on his way to Hungary, bent on a visit to his eldest son, who holds a position as civil engineer in Pesth. He had intended to travel by easy stages, but partly in consequence of indisposition, and partly owing to the roughness of the sea, his journey was delayed. On Good Friday he found himself in excellent health; took walks, wrote home amusingly, and frequently remarked that for a long time he had never felt so well. Next morning he was walking to the Ostend boat, when he suddenly gave a slight exclamation, and fell down never to speak again. He was removed immediately to the hotel, and Dr. Colbeck, who was called in, pronounced the case one of heart disease—a malady which had never been suspected. He was taken to the

y residence, a cottage at Coolinge, near Folkestone; and
hursday, April 9, was buried in the quiet churchyard of
ton, the resting-place of his wife's relatives. No more
le spot could have been selected for his remains, as it was
hbourhood where he had passed much time in former
and of which he was extremely fond. The funeral
e was conducted by the Rev. E. Price, of St. George-the-
r, Bloomsbury: a large number of pharmacists and other
s paid the last tribute of affection by standing round his

s difficult to convey to comparative strangers a just esti-
of his character. He was intensely individual—on the
and commanding reverence as a founder of our society
ne of its most distinguished officials; on the other, inti-
y connected by companionship and keen sympathy with
bf a younger generation. By some he will be mentioned
kilful examiner and an assiduous member of council: he
ive in the recollection of others as a president of the
h Pharmaceutical Conference, equally disposed to advance
rsuit of science and to share in the amusement of the

ill not be forgotten that an admirable account of him
portrait) was contributed to this journal in November
The narrative was almost entirely written by himself, as
exercise of a pious fraud he was induced to arrange his
n an autobiographical form. The remainder was simply
n conversations stated in requisite order, but otherwise
ntouched. The result was particularly happy, and he
e the manœuvre by which he became unconsciously his
storian.

singular trait in Mr. Deane's constitution of mind was
l of committing his own thoughts to manuscript, and a
t expression of distrust in his own abilities.
we ventured (with infinite respect) to remonstrate with
h the sadness depicted in his countenance, and occasionally
nting in his remarks. We quoted the translation of a
rman hymn—

Give to the winds thy fears,
Hope and be undismayed!

eturned a noble reply in answer, observing that appear-
ere no sure guide. He acknowledged and was thank-
the gifts of Providence, and was grateful to the
f all good things for the mercies with which he was sur-
l.

irst paper of importance was on "Experiments on Senna,"
ppeared in July, 1844. It was an attempt to determine
method of extracting the active soluble principles so as
ruct a formula for a concentrated infusion; and to as-
the relative quantities of extract contained in infusions
rent densities, prepared from several kinds of senna.
ults derived were, that Alexandrian Senna was superior
ers, though, in consequence of its (then) serious adultera-
must be carefully selected. Secondly, that Tinnevelly
as next to be preferred, though deficient as compared
e former in fragrance and amount of extractive. Mr.
was accustomed to pride himself on the fact that, though
stigations demanded severe application, they were con-
by the aid of no stronger stimulant than cold water.
tely he did not limit himself to this rigid system of

xt find him at work on the "Physical Characters of
arieties of Carbonated Magnesia," an elaborate com-
on, and probably a fair illustration of his style of
research. The "Mounting of Microscopic Objects" and a
n Vibrio Tritici," are indications of the interest he took
oscopical and botanical studies. It must be confessed,
that his earlier published contributions would hardly
rate how devotedly he cultivated these twin sciences
without neglecting his regular business occupations. Let, moreover, a fact be borne in mind which is constantly ignored, that when a pharmacist, still engaged in business, accepts a seat upon the Council, he makes a deliberate sacrifice of a large portion of his working time. When President of the Pharmacopœia Committee he was the medium of communication between that body and the College of Physicians until the appointment of the Royal Medical Council. Professor Redwood was the efficient Secretary on behalf of the Society; while Dr. F. Farre was Chairman for the College. Mr Deane records—"I made many hundreds of experiments between the meetings, which were seldom held oftener than once a month. Once a week would not have been too frequent, but council, committee, and examinations already occupied a large amount of time, which few of us could afford to sacrifice. I can safely say that during the six years I held these responsible positions, one-fourth of the time was entirely taken up in the service of the Society."

There are few pharmacists who have not been troubled with the gelatinous precipitate which occurs in the *Linimentum Saponis*. In practice this was obviated by the introduction of sapo mollis, to which Mr. Deane objected as not being in accordance with the official directions. Much discussion on the point arose, and he commenced a series of minute inquiries in order to find out "the reason why." From numerous experiments he drew the following conclusions:—That the gelatinization was due to the presence of margarate of soda, which is dissolved when the temperature at which the liniment is made is above 70°, but is not dissolved to a degree to produce gelatinization when the temperature is kept below 70°. He thought that the London process so conducted produced a satisfactory result, the dissolved portion consisting chiefly of oleate of soda.

It will be unnecessary to review Mr. Deane's various papers in detail; a list of the more important will be found in the memoir already quoted. There were three topics that formed for him an unfailing subject of interest. The first was the labours of the Pharmacopœia Committee already mentioned, in which he bore his share. These persevering efforts eventually paved the way for the publication of a work of which English pharmacists are proud. That sundry wise alterations have been suggested was inevitable; but no little credit is due to those who patiently worked out the principles on which it is based. Some notion of the pains taken in preparing materials which facilitated its compilation when consigned to other hands may be gained from reading Mr. Deane's own paper on the acetic acids of the three Pharmacopœias. The second idea of which he was fond was the application of heat, derived from gas or otherwise, to pharmaceutical operations. We do not think the furnace he constructed was a model of success, and better modes of the economical application of gas have been exhibited. The third favourite theory of Mr. Deane was that of percolation, on which process he was a diffuse expatiator.

The apparatus he preferred was a portion of an elongated cone, whose sides formed an angle of 82° to the base line. The dimensions were, twelve inches deep, nine inches broad at top, and six inches at the bottom; the bottom rather concave, with a tubular opening for arranging a tap. Into the vexed question of percolation Mr. Deane would dive on the slightest provocation; and, when fairly embarked on the enticing theme, he would much resemble that Ancient Mariner who once stopped one of three. The scientific observations by which he will be best known amongst his brethren are the papers on microscopic analysis applied to pharmacy, which were the joint researches of himself and his friend Mr. Brady, of Newcastle. They were read before the members of the British Pharmaceutical Conference, and met with the reception of which they were worthy. Never did Mr. Deane appear so completely in his element as at these gatherings. The conference was a new institution, and Mr. Deane was an old man; he risked his situation and had

his reward. At each recurring autumn festival he seemed to renew his youth; his anxieties were left behind at the Clapham Junction, and they experienced the usual fate of luggage left at that hopeless spot—they got no further on their journey. No sooner was the historic wide-awake of the veteran descried by his *confreres* than joy spread throughout the camp, and unbounded satisfaction filled every heart. There was no affectation in his love for his younger companions: there was no concealment on their part of the pleasure created by his presence. Many a tyro who made his maiden effort at these assemblies looks back on the event with solid gratification, and reflects with gratitude on the warm reception and encouragement bestowed ungrudgingly by one of the Nestors of modern pharmacy. Respect soon deepened into strong affection; the bond was mutual, broken but for a while by death, to be cemented in a better world. One thing was common to our revered friend and to the order of those contemporaries with whom he began life—a wonderful assiduity at the commencement of his career, and a capacity for sheer industry greatly to be envied. Farewell, then, to Henry Deane of Clapham. We shall miss the kindly greeting and the smile with which he welcomed the last new pleasantry of his associates. Our members will see no more the tall spare form, the gentle countenance, and the immemorial costume which betrayed his advent. And pharmacy will wait long and vainly before she will number in her ranks a more conscientious follower.

J. I.

Obituary.

Bannard.—March 23, Mr. Henry Bannard, Pharmaceutical Chemist, of Epsom.

Carrick.—January 26, Mr. John Carrick, Chemist and Druggist, of St. Mary's Street, Edinburgh.

Deane.—April 4, at Dover, suddenly, Mr. Henry Deane, of Clapham Common, aged 67.

Jackson.—March 18, Mr. John Jackson, Chemist and Druggist, of Southampton Row, London.

Jubb.—March 6, Mr. Matthew Francis Jubb, Chemist and Druggist, of Chariot Street, Hull.

Kimber.—Jan. 23, at Yokohama, Japan, Mr. James Kimber, aged 38.

Lea.—March 23, Mr. John Wheeley Lea, formerly of the firm of Lea & Perrens, Worcester, at the age of 83 years. In 1850, 1851, 1855, and 1856, Mr. Lea was a member of the Pharmaceutical Council.

McLeod.—February 9, Mr. Michael Russel McLeod, Chemist and Druggist, of South College Street, Edinburgh.

Pegler.—March 20, Mr. Frederick Pegler, Chemist and Druggist, of Lower Norwood, Surrey.

Sharples.—February 26, Mr. George William Sharples, Chemist and Druggist, of Central Beach, Blackpool.

Smith.—We have received notice, but without mention of date, of the death of Mr. Frank Smith, of the firm of Smith & Sons, Norwich.

Temple.—March 17, Mr. Edmund Temple, Chemist and Druggist, of Bristol.

Wey.—February 8, Mr. William Wey, Chemist and Druggist, of Stonehouse, Devon.

PHARMACY IN THE UNITED STATES.

(FROM OUR OWN CORRESPONDENT.)

New York, March 23, 1874.

SINCE my last letter many months have passed, but o arduous duties have deterred me from communicating your readers. Perhaps none of the passing events of the y have been more seriously felt in the pharmaceutical world t the death of Professor William Procter, jun. Your re have doubtless been informed of the action taken in the va colleges of pharmacy of our land, and of the deep sym which all have expressed in the sad affliction. He was "our greatest man" in pharmacy, and his reputation was extended as the profession to which we are allied. His su and unexpected death can scarcely be realised among associates.

The colleges of pharmacy during the past winter have well attended, and it may be called "a successful season." the colleges of pharmacy in the cities of Boston, New Y Philadelphia, Baltimore, Cincinnati, Louisville, Nash Chicago, and St. Louis about 800 students were in atten and the graduates will number about 175. There are colleges in Washington, San Francisco, and Toronto, not having received any statistics, I omit them at pr Our land is, however, large enough to accommodate not these graduates, but many more, and it is safe to predict few years hence our graduates will number as many a students this year.

Several states of the Union have recently enacted laws tecting pharmacy, and this will continue till it will be the and not the exception. It is a matter of congratulation th legislators are willing to enact laws which put the contr pharmaceutical matters in the hands of our own members in of politicians.

Our State pharmaceutical organisations are doing mu awaken an interest among those who have neglected our pa association. During the last month such an organisation effected in New Hampshire, and our indefatigable treasu the American Pharmaceutical Association, Hon. Charles Tufts, was elected its president. The New Jersey Pharma Association held a large and very successful meeting in J city (just opposite New York city), and not only were interesting papers and facts presented, but a large and some display of pharmaceutical and chemical articles druggists' sundries was arranged. The social element was introduced, and the evening was enjoyed by the visit music, promenade, and dance.

The new United States Pharmacopœia has now been enough in practical use to give opportunity to learn its d as well as its good qualities. Perhaps one of the clas articles which has suffered most by the change is that of extracts. It would seem as if the "final committee of rev had too hastily adopted some of the formulæ, for, on pr trial, they fail to produce as good preparations as the for of the previous United States Pharmacopœia. This is th noticeable in fluid extracts of Ergot and Ipecac., and it well-known fact that most of our careful dispensers and facturers adhere to the old formulæ. Another cause of complaint is the modification of some formulæ, such as ot colouring matter from some of the tinctures, causing to observe the change; but this is a minor trouble as com to what must have occurred in making the British Ph copœia take the place of the *three oracles* which preced In a future letter more will be mentioned about our Ph copœia.

the January number of the CHEMIST AND DRUGGIST you ed the translation of the German Pharmacopœia published iladelphia. It may not be amiss to add that Mr. Lochman ucceeded most admirably in the faithfulness of his work, hat the translation is meeting with a large and rapid sale, h it certainly merits.

rrish's "Pharmacy," which is largely known in England, so just about to issue from the publisher, Henry C. Lea. ssor Parrish, previous to his decease, had prepared mate- for a revised edition of the work, but had not made any ress in re-arranging it when called away. Mr. Thomas iegand was chosen to act as editor of the work, and has tly completed it. Having carefully examined the proof s I can say that too great praise cannot be awarded Mr. and for his excellent labours. The work has been improved arrangement, much of the less important matter omitted, about 250 pages of new material have been added, and of the old matter entirely re-written. The new nomen- re of chemistry has been adopted throughout, and this re alone will make it of great assistance to pharmacentical nts. The works on practical pharmacy are so few that it r to suppose that this will be largely sought for in England. worthy of a place in the working library of every pharma- ho can read our language.

NOTES FROM GERMANY.

(FROM OUR BERLIN CORRESPONDENT.)

RY important chemical discovery has recently been made laboratory of Professor A. W. Hoffman, at Berlin. He roduced from the cambium juice of certain trees of the ræ order a crystalline substance, to which he has given ame of *vanillin*. This vanillin is a perfect substitute for n, and is a very remarkable addition to the series of the r and economic triumphs of modern chemistry.

fessor Kolbe, of Leipsic, has for some time prepared lic acid artificially, but his process is at present patented ecret.

Leipsic there is relatively a greater amount of chemical going on than in any German town. In the laboratory of ssor Kolbe alone there are 130 apothekers preparing for examination. The total number of students in Leipsic aches 3,000.

aw has existed in Prussia for about a year that all pre- ions must bear the signature of the apotheker who pre- them. Hitherto this order has not been very generally ed, because the dispensers were not very clear as to how ry it out, or its use when executed. In large establish- , where prescriptions pass through the hands of two or it is difficult to assign the responsibility to any one in ular, while, in smaller shops, where the proprietors do own dispensing, their name is always on their labels. , however, the imposition of a fine for the neglect of this has directed more particular attention to it. Henceforth, ore, a prescription frequently repeated, and dispensed at s establishments, will gain the advantage of quite a col- n of autographs of both celebrated and obscure pharma- at the probable cost of its clearness and legibility.

ently a prescription, duly signed, was brought to an ker in a large town, in which was ordered 40 grammes of l hydrate, the half to be taken for a dose. As chloral e does not happen to be among the medicines of which aximum dose is prescribed by law, the recipe was dis- and the patient died. It turned out afterwards that the iber intended 4 grammes instead of 40. Both physician otheker have been punished.

(BY OUR VIENNA CORRESPONDENT.)

well known, the metric system of weights and measures made compulsory in all commercial dealings throughout strian Empire from the commencement of 1877. The ment has, however, issued an order to apply it to the pharmaceutical establishments this year. Both druggists and grocers have already widely adopted it for their own convenience.

Dr. Goldefroy, of the chemical laboratory of the Austrian Apotheker-Verein, after a long series of experiments, has established the fact that the chlorides of those metals which are soluble only in strong acids are easily crystallisable into double salts with rubidium and cæsium, some of which are themselves very difficult of solution. The Professor has produced and described the following hitherto unknown salts:—*Antimonio-cæsium-chloride, antimonio-rubidium-chloride, bismuth-cæsium-chloride, bismuth-rubidium-chloride, zinc-cæsium-chloride, zinc-rubidium-chloride.* The first of these salts is the most difficult of solution; therefore, the acid solution of antimonio-chloride may be used as a re-agent for the cæsium salts.

At the last meeting of the Austrian Chemical Society, Dr. von Lang described the crystals of Sarg's glycerine, specimens of which attracted a good deal of scientific attention at the Vienna Exhibition. He finds them to be hemihedral crystals of the monometric system. They are frequently from 10 to 15 centimetres in length.

In the Chamber of Deputies recently, during the discussion on the Budget, the Education Department proposed a grant to the pharmacentical school of the Austrian Apotheker-Verein, and also aid towards the erection of similar schools in the larger provincial capitals, both of which proposals were carried.

THE PREPARATION OF, AND COMMERCE IN, FISH OILS.

BY P. L. SIMMONDS.

[*Continued from page* 88.]

At these places (Malabar and Calicut) the preparation is carefully made as follows, according to the official India reports:—

SHARK OIL.—The sharks (*Carcharius melanopterus*) are caught principally in October and November, for at this period the livers are much more developed than at any other season. The oil obtained from them is of the same quality whatever the season they may be taken, but they furnish about three times the quantity in autumn than in any other season. The most esteemed livers are firm, and of a rose colour; those which are whitish and flabby are rejected as inferior. After having separated the vesicle, the livers are washed, and all the blood is taken out through incisions. They are then cut into medium-sized pieces, which are placed in a large earthen vessel, with enough water to cover them. They are now heated for fifteen or twenty minutes, after which they are allowed to cool. The oil, which soon floats to the surface, is gathered in ladles made from the half of a cocoa-nut, and is then poured into glazed earthenware jars. It is now poured on a sieve, and all which does not pass through is thrown away. Three or four days later, it is again filtered through a thick strainer, in order to separate the abundant deposit of stearine, and it is necessary to repeat this operation four times, at intervals of from twenty to twenty-five days, to separate the deposit, after which the oil remains clear, and of a fine straw colour, and smelling very much like cod-liver oil. Thus prepared, it is reserved for medical purposes. In India a manufacture of inferior oil is also carried on, which is used for lighting and other domestic purposes. It is prepared from the liver of sharks, rays, and other sorts of fish. The livers are heated without being previously washed or picked, and the product is not purified. When the liver of the shark is used with the livers of the other fish, the oil so obtained has a very offensive odour and unpleasant taste, which cannot by any mechanical or chemical process be removed, however carefully it may be prepared. A large quantity of oil is also obtained from sardines, and especially from the *louar* (*Clupea Neohowii*): these are gathered during the months from August to November, and are then treated with boiling water to separate the oil, which floats. Oil is also obtained from the livers of several *Siluroids*, but it is only during January and February that the organs are rich enough in fatty matter to be remunerative.

At Bombay, the shark fishery is largely prosecuted, and as many as 40,000 a year are captured. The dried fins are in high

demand in China. The liver of the great basking shark or mhor (*Selache maximus*), which is always harpooned, will, if large, yield eight barrels of oil. The oil is of a low specific gravity.

The Bay of Pinda, Angola, is full of fish. Among others, shark and dog fish are caught, the former reaching nearly 100 lbs. weight, and from the liver eight to ten quarts of oil are obtained. About 180 pipes of fish oil are annually exported from Angola.

The shark fishery is carried on extensively on the coast of Norway, where the following species are caught: the Greenland shark (*Scymnus borealis*), the basking shark (*Selache maximus*), the picked dog-fish (*Squalus acanthias*), and the kulp (*Squalus spinax nigra*). The liver of the former yields from one-half to two barrels, or from 15 to 60 gallons of pure oil. That of the second renders from five to seven barrels of liver, occasionally from 10 to 16; sometimes, but rarely, as much as 24 barrels of liver have been obtained from a single fish. When the liver is rich, six barrels will produce five barrels of oil of 30 gallons each. The liver of the other two species, although less in size, is unusually rich, and yields a very superior kind of oil.

To obtain the oil from the livers of cods and sharks and the intestines of other fish, the substances are merely placed in casks or vats and submitted to the action of the sun. The oil thus melted out is considered the best. After this has been removed the remaining mass is submitted to heat in iron boilers, adding a little water to prevent the oil taking fire, and thus a second or inferior quality of oil is obtained. About 20,000 pouds of this cod oil is made on the coasts of Lapland. The oil obtained from the intestines of fish, principally the "sandre," is prepared in the same manner, and about 13,000 pouds are obtained in the rivers, which belong to the Cossacks of the Couban.

The oil prepared for industrial purposes, and that used for soap-making, in tanneries, for illumination, &c., is obtained in general by putrefaction, which dissolves the fleshy envelopes containing the oil from certain parts which have no other use, such as the livers of the cod and the intestines of other fishes, and often entire fish, chiefly the herrings which ascend the Volga, and different small fish of the *Cyprinoid* family. Notwithstanding all that there is unpleasant about this process, it has its uses, except that the employment of entire fish for the purpose is objectionable, since to obtain merely a small quantity of oil of inferior quality, which might be replaced by mineral or vegetable oils, a large quantity of food is sacrificed.

When the oil is obtained from entire fish the process is a little different. The herrings are placed in open casks, containing about 1,000, and boiling water is poured on the mass. Several days elapse before the fish enter into putrid fermentation, under the action of the air, the heat, and the hot water, and the oil separates, the whole being transformed into a half-liquid reddish paste, of a disgusting odour. But when once this putrid fermentation has commenced, a day suffices. The oil is then collected from the surface, and the mass thrown away. For 15 years or more herrings have been put to this use, as there is a prejudice against eating them in Russia, in the belief that they are rabid, owing to the habit they have of turning round and round when they are spawning. About 100,000,000 of these fish are sacrificed annually for oil making. During the three or four weeks that the influx of fish continues, 100,000 to 250,000 pouds of herring oil are made on the Volga, according as the fishery is abundant and the fish more or less fat.

To obtain oil, the fat which surrounds the intestines of the sturgeons and the sandars and the entire herrings are collected. In the former case the fat is washed and cut into pieces and thrown into a vat with 10 or 15 pounds of salt. The whole is well mixed, and then placed in a boiler, which is enclosed in another large copper vessel, where boiling water dissolves the oil out. The oil floats on the top, and is skimmed off and placed in oak casks. This oil is pure, and of a clear yellow. It is used for food purposes, and for moistening the caviare packed in small casks, when it is too dry. Since 1870 an illicit production of oil from the lamprey has been carried on, as they arrive in mass up the Volga in December and January. These fish yield about eight pouds of oil per thousand. It is pure and clear, and sells at about 9*s.* the poud. 1,000 lampreys will weigh about 140 lbs.

Fish oil is obtained in large quantities on the extended coasts of Japan, and especially of Jesso. The principal market is Hakodade. There are four qualities, but the fish from which it is obtained are not known.

Fish oil is obtained in China, from the entrails of several kinds of fish. A yellowish oil called "Houang-ku-ya," with a strong fish odour, is used to kill vermin, and in cutaneous affections; but it is more employed for veterinary uses than in medicine. According to Dr. D. J. Macgowan, of Shanghai, the medicinal virtues of fish oil as a cure for many complaints was known to the Chinese centuries ago; but instead of cod-liver oil they use the oil from the shad.

In Brazil an oil is obtained from the Pirarucu (*Vastris Cuvieri*), a large fish, of which there are quantities in the Amazon and other rivers. It is a concrete oil, yellowish, and of an unpleasant flavour, much used as a relief for rheumatism.

From the fat of the marine animals obtained by the fishery or the chase, as well as the blubber of whales, which on the coasts of Lapland occasionally approach the shore and are left stranded by the ebbing of the tide, oil is prepared which constitutes an important article of commerce.

Fish oil leads us next to consider the production of oil from other classes of marine animals, some of which have already been described.

Dugong oil.—The oil of the Australian Dugong (*Halicore Australis*) was a few years ago brought into notice by some medical men as a therapeutic agent, possessing all the advantages of cod-liver oil without its nauseous taste and smell. No great supply of it could, however, be obtained, and from latterly arriving adulterated it lost any reputation it may have merited. The distinction between this oil and cod-liver oil is that it contains no iodine. Another species, the *Manatus Americanus*, yields from 5 to 25 gallons of oil, which is used for cooking and lighting.

Alligators are killed in great numbers in the river Amazon and other parts of Brazil, for the fat, or adipose tissue, which is rendered into oil. Although it has a disagreeable smell it is not worse than train oil. It is used for burning, and for embrocations in rheumatism.

Turtle Oil.—Oil is obtained in the Pacific Islands, and largely in Brazil, from the eggs and fat of various species of tortoises, by means of fermentation and decoction. It is of a yellowish colour and opaque when well prepared, and clear as a liquid when purified, with a peculiar flavour. It is much employed for culinary purposes by the lower classes in Para, Brazil. In medicine it has the reputation of being useful in rheumatic complaints.

IN SEARCH OF AN ASSISTANT.

(BY ONE WHO IS ON THE TRAIL.)

NOT many months before the stout lever of an Act of Parliament was applied to the incubus of our fraternity I became the proprietor of a snug little pharmacy in a rising suburb of one of the busiest of northern towns. I was not, let me observe, one of the latest of the "exemptions," nor did I lead a forlorn hope by scuttling into business ere the dreaded Bill should receive royal assent. I had, on the contrary, been inducted to the art and mystery of our calling by the orthodox paths of "Minor" and "Major," for though many roads may lead to Rome, I certainly have a preference for the most respectable route. The concern of which I assumed direction had been established some years, having been commenced by the late owner—whose demise had placed it in the market—almost before the more prosperous inhabitants of the thriving town had discovered that villa residences and croquet lawns were essential parts of existence. As in most rural districts, the dispensing connection was not burdensome, but still it was gradually improving, and to its further development I was, of course, chiefly devoted.

Part and parcel of the business was an old retainer, who had been factotum to my predecessor from his youth up. He had known pharmacy in its, shall I say palmy days, when the village apothecary was looked upon as a kind of animated encyclopædia, had in request for all manner of domestic necessities, and whose dictum held in reverence upon disputed points in every subject ranging from theology to accouchements. I am bound to add

the distinguishing characteristics of this particular relic e hardly such as I should have made prominent *desiderata*: had a fancy for tempting the candour of wholesale houses in matter of "crabs' eyes" and "hartshorn powder;" he ved implicitly in "roche alum," and would have been rely shocked at the suggested identity of "Armenian bole" "Venetian red." But these fancies were harmless, compared some I shall refer to presently, and as his experience of business was really valuable, and he was heavily laden with t the advertisements call "encumbrances," I had not the heart ast him adrift. On a certain Christmas Day, however, he ived a very pressing invitation from *Pallida Mors*, and Boxing- t found me assistantless. And now commenced my career of ous and disastrous search, a few incidents of which I will to record. At this time my connection had considerably ened, and promised to extend still more rapidly, since the rban confines were, to use the elder Mr. Weller's expression, vellin' wisibly." I therefore determined, or, I should rather intended, to secure the services of a thoroughly efficient stant, one who possessed extensive experience and would do lit to a good salary. My wants were accordingly made wn through the usual channels, and I received six applica- s. I selected that of an individual who described himself "25 years of age, well up in dispensing, had been seven rs in the trade, was acquainted with continental pharmacy, spoke French and German." We soon came to terms, and lue time this cosmopolite entered on his duties. Although ave long since ceased to judge either a cigar or mankind by earances, I must candidly avow that my assistant's *tout mble* was anything but prepossessing. He had a predilec- for wearing extremely short hair, parted—if the little which ained to him could be said to be so divided—in the middle, plastered down on either side, with the profuse assistance of ade. He rigorously deprived himself of whiskers, but ed for this denial in a most ferocious moustache *à l'empereur*, extremities of which were perfectly rigid with wax. His f, which could only have been excelled in variety of colour by ph's coat, was centred with a huge carbuncle (or its imita-), and another of similar size adorned his finger. All this ndour, however, was eclipsed by a most gorgeous watch in, loaded with not less gorgeous appendages, and which ld have made the fortune of any lord mayor. As he was fly engaged at the retail counter, his dispensing abilities e not put to any severe test—a mercy which at the time, haps, I did not fully appreciate. He had regularly availed self of leave of absence for an hour and a half every rnate morning, to take a "constitutional," which, he said, state of health needed. I used to notice when he returned m these exercises that he seemed anything but freshened by process; in fact, he was frequently in such a somnolent and se condition of mind that it was only by a supreme effort ould comprehend the wants of a customer—till they had n thrice expressed. A few weeks after his arrival, I had sion to leave home for a couple of days, and on my return und that one of the drug travellers had called. Mr. Cosmo- te, not content with giving an order from the want-book, as he expressed it, "looked up" a few other items. If I good temper ever parted company, I think we must have lost other when that invoice came. Things which I never had ted, nor was ever likely to want, and others of which there already more than ample stock, had been recklessly heaped ther. Fourteen pounds of iodide of potassium, seven pounds pium, and a half-pint bottle of attar of roses were among first to meet my eye. To make himself still more exaspe- ng, the creature would not even attempt to justify himself, coolly stated that he had simply approved the commercial's gestions. The temptation was great to be quit of him on spot, but I extended my sufferance to a month, a respite of ch, however, I soon repented, for, happening to go out one rnoon with a few friends who had been dining with me, I nd him when I came back stretched on the hearthrug, im- ely nursing the only decanter he had not emptied. Our ing, then, was brief, and I can only hope that the proprietor he "Golden Lion," with whom this charming specimen had up almost as heavy an account for himself as he had for may get a small dividend out of his estate.

This, then, was my first experience. "Now," thought I, y eyes are opened; I know the kind of assistant to shun: next shall be a paragon."

Instead of advertising, I made known my wishes through ate agencies, and was recommended to a young man, a turnover, who was anxious to improve himself in dispensing, and desired time for study. I engaged him. He was a gaunt individual, with a sallow, unhealthy complexion, and an unpleasant habit of always wiping his hands on his hair. At 22 years of age he had, to his infinite credit, just struggled through the preliminary examination. Here, I thought, was fallow ground, and mine should be the delight and pride of bringing about its cultivation. I accordingly set apart an hour every day to help him in his reading, and an evening a week to direct for him a few experiments. He knew scarcely anything of dispensing, and what he did I had to unteach. It was often a source of amusing wonder to me to imagine how ruthlessly his former master must have dealt with the prescriptions which came under his thumb. His *protégé*, at all events, was impressed with the conviction that all solid substances, previous to solution in water, must be ground to dust with mortar and pestle, and then beaten up in the solvent, as if there were no other compound than sulphate of calcium in the world. Thus, this young gentleman would pound away at a drachm of iodide of potassium as if it could only by the utmost tenuity be persuaded to dissolve in six ounces of water. Citrate of iron and quinine, and all the other scale preparations, would share the same fate. The misfortune was, however, that when I had shown him the needlessness of his exertions, he went to the other extreme, and would shoot into a bottle such things as crystals of potassium chlorate, and then shake himself so violently in trying to make them disappear that it would take him several hours to recover his senses. I don't know whether these convulsions used to shake out of his head whatever new facts he might have gleaned, but certainly the quantity of instruction he received and the amount of knowledge he gained seemed inversely proportionate to each other. He exhibited at times a particular fancy for chemistry; but instead of being content to begin at the beginning, and understand what he read as he went along, he had a most unfortunate love of original experiments. He seemed to take especial interest in the effects of heat on different substances, and once I caught him in the act of attempting to boil several ounces of benzole, securely enclosed in a flask, over a naked Bunsen. Of course he was several times in imminent danger of blowing his head off with hydrogen apparatus, and no amount of cautioning ever would induce him to wait till air was expelled before applying a light to the issuing gas. I secretly believe he regarded an explosion as the salient point of all experiments, and the ensuing devastation as a tangible and legitimate result. His crowning *coup*, however, was one evening when he was suddenly called away to a customer just as he had started some hydrogen in a Wolff's bottle. Determined not to lose the gas, he took out the tubes, corked the necks tightly and went away. If ever I have to witness such results from an experiment again, I think I must give up chemistry altogether.

Sorry though I was to nip research in the bud, I was compelled, if only from motives of self-protection, to sever my connection with this young genius, and to commence a search after assistant number three.

I was now under the impression that possibly I should be more successful if I secured the services of an older man, who, if less brilliant, might at least have the advantage of sober-minded experience. After some difficulty I met with an individual who appeared to answer my expectations. He was somewhere on the shady side of thirty, and had passed the Modified Examination. I was rather favourably impressed with my choice this time. He had a rubicund, well-fed appearance, was extremely neat in his attire, and precise, almost punctilious in his behaviour. My only objection was to his apron, which he donned from the first moment he entered the shop, and never removed, except at meals, throughout the day, whatever might be his occupation. I hope I am not singular in my utter abhorrence and detestation of this barbarous relic. "Aprons," says the author of *Sartor Resartus*, "are defences against injury to cleanliness, to safety, to modesty, sometimes to roguery." I can understand the utility of the "thick tanned hide" to the builder, or the "jingling sheet-iron" to the "half-naked Vulcan," but why, in the name of reason, should a pharmacist wrap *himself* in a white bib, as if he were a turnpike man or a paper-hanger. If he cannot dispense a mixture or make a dozen pills without incurring a tailor's bill, then by all means let him deck out in a smock-frock, or an oilskin suit; but for respect's sake, let us have no more aprons. After number three had been with me about a week, I was surprised to see him walk into my room one morning after breakfast, and in more than usually measured

toues enquire if I thought he suited me. "Yes," I replied, wondering what disaster was looming ahead now.

"Oh, I am glad to hear it," he said, "because that is not the case with my diet."

He had always taken meals as one of the family, so I somewhat warmly enquired of what he complained.

"Well, in the first place," he said, "I miss my sherry at dinner, and have long been accustomed to a devilled kidney for supper; also——"

"One moment," I interrupted. "You had these things in your last situation?"

"Of course!" he replied.

"Then pray," said I, "stipulate next time for *pâté de foie gras* and Moselle. Good morning."

Thus number three disappeared, and I was again left to my search. Since his departure, four others have come and gone, in the space of twelve months. Each time the scarcity of assistants seems more and more manifest. The wholesale houses report that their lists are almost blank, and advertisemont columns exhibit vacancies and wants in the proportion of about two to one. My latest experience was of a Major Associate, at a salary of 80*l.* per annum. He was thoroughly efficient, and would doubtless be with me still, had he not opened another pharmacy on the opposite side of the street. I am, therefore, once more on the trail.

NINE DAYS IN A CO-OPERATIVE STORE.

(BY A SPY.)

WHERE I went, when I went, and why I went as dispenser in a co-operative store it is not my intention to disclose, but if a brief sketch of my experience inside the enemy's camp can be of interest to chemists generally it is at your service.

My first application for an appointment with these benefactors of the human race was not successful.

An advertisement had appeared for an assistant at a co-operative store, to which I replied, and was in turn replied to. I was requested to come and see the directors at 5 o'clock on a certain day. I went, and, somewhat to my surprise, found myself one of six—at the top of a ricketty staircase—waiting the pleasure of the half-dozen Civil Service clerks styled "the board of directors." I got up a conversation among my companions, and we stated mutually our reasons for proving faithless to our traditious. One temptation was paramount—short hours. Four of the other five were young men anxious for spare time to work up the "Minor." The other declared himself a passed man, but desirous of spare time for its own sake. I, being the last-comer, had the felicity of hearing all the others called into the presence of the august board before me. At last my turn came, and I was ushered into the chamber. There sat the president, with his bald head and white whiskers, and there the fox-eyed secretary, rubbing his hands exultingly at the number of applications. There, also, sat the manager of the drug departmeut, upon whose *fiat* all depended.

Involuntarily I scowled at this individual as I entered—for I had met him at the counter previously, and had been favoured with a taste of his incivility (as though everything connected with the CIVIL Service must of necessity bear out the irony of the appellation). My doom was thenceforth fixed, and so I determined to profit by my position to give the "board" a bit of my mind. I answered curtly their numerous questions, till it came to "references;" then I said, "Sirs, I have here no less than ten testimonials, and I could give you as many more references. I *could*, but I *won't*—for I know that no respectable chemist would notice the application for character from a co-operative store." A grim smile played on the countenance of the fox-eyed secretary, an ominous frown on that of the "Manager of the Drug Department," and my fate was decided.

But this was only an episode. My real engagement was on this wise. An advertisement again appeared; a reply succeeded to my reply; a short and decisive interview with a burly and surly "Managing Director," whose chief conditions were, that if he engaged me I was "not to put the wrong stuff in," as it was for that very reason my predecessor had been "sent about his business." A little haggling as to terms, a cursory glance at my testimonials, and ultimately an engagement as assistant-dispenser in a co-operative store at 30*s.* a week. Hardly had the door closed behind me when I was called back. Ha! thought I, he is going to offer me a rise in three months if I behave myself. No, he wasn't—he was only going to reiterate his solemn injunction, "Mind, now, you don't put one stuff in instead of another." I assured his directorship most emphatically that I would endeavour always "to put the right stuff in," and so descended into the dispensing department, situate in the cellar beneath the retail shop. Here, amid the mysteries of co-operation, I spent nine long days.

In all we were seven men and a boy in the drug department—four assistants in the retail and one "packer," and two in the dispensing, and "the boy." Of these, one in each department was the manager; and I may here state by the way that MANAGERS were in every department far more plentiful than was requisite, and indeed, between managers and sub-managers outnumbered all the other "hands" put together.

The manager of my (the dispensing) department was the only qualified man, except myself, in the place, and his sole qualification lay in his having been in business prior to the passing of the Pharmacy Act. Accordingly, his name figured on the labels, &c., for the more plausible evasion of that Act: but although such was the case, the manager of the retail was supposed to have the right of precedence (and pay), on the ground of seniority of service. The competence of either the one or the other to manage a chemist's business is a matter upon which I shall allow facts to speak for themselves.

The remainder of the "medical staff," as we were designated, consisted of two mere boys, the elder of whom, from seniority of service, considered himself (but was considered by nobody else) the sub-manager of the retail and two much-to-be-pitied married men, who had been in business for themselves, and had, from some unexplained cause, ceased to be so now.

My predecessor, I found, had been summarily dismissed for using *oxide of zinc ointment* instead of *benzoated lard*, thus substituting, in the director's words, "one *stuff* for another." I should not have been surprised at such a cause of dismissal anywhere else, but really I was surprised that at this co-operative store, where mistakes and substitutions appeared to be the order of the day, exception should have been taken to a slight error of that kind.

Was it a worse error than supplying "acetic" acid instead of "nitric" acid to test gold with? Yet was this done under my own eyes by one who should have known better what he was about than my predecessor. Or was it worse than filling the nitric acid bottle with acetic acid, which was the proximate cause of the above mistake?

Would anybody be surprised to find, as I found one day, a hair wash, containing a fair proportion of aromatic vinegar, filtering through magnes. carb., or, rather, effervescing over the funnel in the endeavour to do so?

One day somebody, who shall be nameless, came to me and showed me the following prescription:—

Zinci Sulph., ℈j.
Alum Sulph., ℥iij.
Misce. Pulv. pro injcct. Mitte xxiv.

The *Z* of the *Zinci* resembled a *Q*, otherwise the word was fairly written. I immediately read the prescription as above when the individual before mentioned informed me that he had read and dispensed it on the previous day—

QUINÆ (I) Sulph., ℈j.
Alum Sulph., ℥iij.
Misce. Pulv. pro *inject.* *Mitte* xxiv.!!!

Here was an ounce of quinine wasted, without any excuse whatever, for what dispenser would dream of putting quinine in vagina powders (as these evidently were) at the rate of a scruple in each? Of course the powders had been sent back as not the same "as before," for they had been previously made up at a well-known West-End house, no doubt correctly. Now what would you think, Sir, was the next thing on the programme? To try and save the quinine, by dissolving out the alum in boiling water, if necessary, precipitating any of the alkaloid that might get dissolved in the over-acid sulphate of alumina, and dissolving the precipitated quinina in ether, &c., &c.? Oh, dear, no! To throw the powders away? That was the next thing. It would be useless to dilate upon these specimens of the scientific and accurate manner in which co-operative stores dispense "the prescriptions of duly-qualified medical men." Every one can judge for himself at least whether our Pharmacy Act ought to be able to reach and stamp out such

gerous dabbling in pharmacy by those who are unable to
rlook their too careless or too inexperienced assistants.
'he question for us (and for the public also) is, how far an
framed for the protection of Her Majesty's subjects becomes
ad letter by being thus set at naught, evaded, and defied;
s such a useless thing worthy of the name of an Act of
liament?
, for one, agree with "Justitia" (in your last issue) that the
'utive of the Pharmaceutical Society would do well to inquire
the legality of such organised infringements of the spirit, if
of the letter, of such an Act. If it be found lawful, there is an
at once to the necessity for passing stringent examinations:
one has to do is to set up a drug store, engage a registered
hist as assistant, and laugh at the folly of those who com-
d the Pharmacy Act. If, however, it be found the contrary,
think it would, how much more dignified it would be of the
t noble "Council" to use their "surplus fund" in ronting
interloper than in pouncing upon petty tradesmen and the
—straining at the gnat and swallowing the co-operative
el. Would it not appear less pettifogging, and, withal, more
rageous?
But I am digressing, as well as transgressing all bounds; so
ill conclude by saying that we did from 20 to 50 prescrip-
s a day, besides refusing many which came in late in the
, and which were no doubt dispensed by some unfortunate
mist, as well as those which our customers required in the
ht, or on Sundays, or on Bank holidays, for our hours were
n 9 a.m. till 6 p.m.—till 2 p.m. on Saturdays. No Sunday
k, no night work, and holidays almost *ad libitum*—these are
little baits that are held invitingly out to entrap us
stant dispensers, and it is therefore no wonder that there
e twelve competitors for the vacancy which I had the honour
occupying.
Du reste, the prices of pills, tinctures, &c., varied according
heir composition: from 6*d.* for a six or eight ounce mixture,
s., or more, it being not the size of the bottle, but the
uff" it contained, which affected the price. Pills were gene-
y 3*d.* a dozen, and powders from ½*d.* to 1*d.* each. As for the
il prices, they were 5 per cent. on cost, whatever the article
. Each customer looked upon us as "their" assistants, and
ered us about accordingly. Fancy, Sir, the felicity of having
r three thousand masters, when we are distinctly told that we
not serve more than one at a time faithfully!
To conclude, having reached my first "pay day," having care-
y noted the salaries of all the others, and having signed my
ne for the first time on the "pay sheet" as the recipient of
e days' pay, I informed the "manager" that on that day
k, *considering the smallness of my salary*, I should tender
resignation, which, on that day week, I did.

E ADDITIONS TO THE BRITISH PHARMACOPŒIA.

HE list of additions to the British Pharmacopœia is now published, and is sold at the office of the General Medical ncil, price ninepence. It contains 24 pages, uniform in size h the 1867 Pharmacopœia. Criticism on the work has eady commenced, and at the last evening meeting of the armaceutical Society specimens of the whole series of the new parations were submitted by Mr. Umney, who also read a y able paper commenting on the processes and their results m a pharmaceutical point of view. The following is a *resumé* Mr. Umney's paper:—

Prefacing his comments with the remark that the compilation a work is a much more difficult task than a criticism; also, the other hand, that criticism fairly carried on must, in the , be to the benefit of those criticised, he proceeded to con- r the preparations seriatim.

Acetic Ether.—Although not new to the chemist, this is a y with which pharmacists are but little familiar. All will ember the characteristic and pleasant odour so often noticed reparations containing alcohol and acetic acid, and notably he officinal tincture of acetate of iron in which acetic ether nmistakably formed, much to the detriment of the tincture, so much from its presence as from the loss of acetic acid, consequent deposit of a basic salt (which, by the way, may obviated to a degree by having about 5 per cent. free acetic acid present in the tincture). This ether, we have been told has more especially been introduced with a view to its use subsequently when the Pharmacopœia is more generally altered.

The special objects in its introduction may have been for flavouring certain preparations, and also to have a more perfect solvent of cantharadin when making blistering fluid.

The Pharmacopœia does not pretend in all cases to give minute directions to manufacturers, but merely general remarks for their guidance: it therefore merely states that this ether may be made from dry acetate of soda, rectified spirit, and sulphuric acid. A better form could hardly have been given, as the more anhydrous the two liquids the more quickly and abundantly do they produce the compound ether.

Chloride of calcium is directed to be used to dry the ether when produced, by digestion with half its weight, and final rectification.

Here I cannot help noticing one omission of great importance, which may lead to confusion, viz., the non-rectification of the product from a solution of carbonated alkali, to remove free acetic acid, of which considerable quantity will always be present.

Under "characters and tests" we have the specific gravity described as 0·910 and the boiling point 166°. In Gmelin's "Chemistry," we find the specific gravity described as ·888, and the boiling point as 165° (74° Cent.)

Miller also very nearly corroborates this, for he names ·890 as the specific gravity, and 164° as the boiling point.

But upon reference to Watts' "Dictionary of Chemistry," this ether is described as having a specific gravity at 0° Cent. of ·910 (Kopp) and a boiling point 74·3° (166 Fahr.)

In the face of this conflicting evidence by good authorities, it is difficult to decide at any rate the specific gravity of acetic ether, unless by actually working out the matter for oneself.

I had my suspicions that if I could find a specimen in pharmacy that would answer to the Pharmacopœia tests I should in all probability find free acetic acid as an impurity. I also thought that some specimens might be contaminated with ordinary sulphuric ether.

Accordingly I examined three, with results as under:—

	Specific gravity.	Boiling point.	Free Acid.
a	·890	160°	none
b	·889	158°	,,
c	·915	164°	10 per cent. of monohydrated acetic acid.

It would therefore appear that the text in the addendum, to be strictly accurate, must in some way be modified, and at least direct the rectification of the product over carbonated alkali, to ensure the absence of free acetic acid.

Nitrate Ammonia is so well known to us, as the source of laughing gas, that it seems almost unnecessary to bring it before you.

The tests of the Pharmacopœia have been framed with great caution, and anyone carefully following these cannot fail to select a good specimen of the salt now so largely used for the production of nitrous oxide for use by the surgeon dentist.

It would be well here to call attention to the presence of chlorides in some commercial specimens, which must, upon being fused, produce a gas much contaminated with the irritating vapour of ammonium chloride.

Nitrite of Amyl.—This powerful medicine, although known since 1844, when it was discovered by Balard, has been but little used. We are indebted to Guthrie* for having first observed in 1858 the remarkable and powerful action of this liquid on man. Its physiological properties have been investigated by Drs. Richardson, Brunton, Talfourd-Jones, Anstie, and others, and have formed the subject of more than one paper for the meeting of the British Association.

Pharmacists, here and in America, seem to have given some attention to the production of this remedy in a state of purity.

Maisch† prepares it by the action of nitric acid direct, upon amylic alcohol, and reserves that portion of the liquid for final purification which distils between 96° and 100° Cent.

Tanner‡ takes advantage of Redwood's process for spirit of

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* *Journal of Chemical Society*, vol. xi, 1859.
† *Pharmaceutical Journal*, April, 1871, p. 865.
‡ *Pharmaceutical Journal*, November 25, 1871, p. 421.

nitrous ether (the British Pharmacopœia process), and prepares the amyl nitrite in this way. Other processes have also been suggested.

The chief points in the production of this body in a state of either absolute or even medicinal purity, first and foremost hinge upon the thorough fractional distillation of the fusel oil, until the amylic alcohol selected for use has a constant boiling point of 132° (Cent.). The crude nitrite, prepared by either of the processes indicated, must be washed with caustic soda, to remove prussic acid formed during the process, and nitrous compounds, and finally rectified over potassic carbonate.

That portion only is reserved for use in medicine which distils between 96° and 100° C.

The boiling point, as given in the Pharmacopœia, is not, I presume, intended to be the boiling point of absolutely dry and pure amylnitrite, indicated by Guthrie, as 99° (210° Fahr.), but rather an average boiling point of good medicinal nitrite, ranging through some eight or ten degrees of Fahrenheit's scale.

The specific gravity, as represented in the Pharmacopœia, is, I believe, for medicinal purposes, sufficiently accurate. Some three years since I found that some specimens I then examined were not amylic nitrite, but were contaminated wholly with nitrites of radicals much higher in the series than amylic alcohol.

Chloroform water is, perhaps, one of the best of the introductions into the Pharmacopœia. All, at some time or other, have been inconvenienced by the sparing solubility of chloric ether, when ordered in a mixture in such quantity as to be only partially dissolved, which difficulty has been considerably aggravated by the variable strength of chloric ethers as compared with the officinal spirit of chloroform.

The water, containing one-half per cent. (fluid) of chloroform, seems to be, as far as I have observed, a fully saturated solution.

Areca Nuts, as they are termed in commerce, are introduced as a vermifuge.

It has been urged that this remedy, to exert its maximum anthelmintic force, must be in a certain state of division, and not prepared as a fine powder.

My opinion is, that this is more imaginary than real, and that, in all probability, when a specimen has been pronounced inert, it was due either to partial destruction by an insect of the betel seed before powdering, or to the powder having been stored for a considerable period previous to administration.

Aurantii Fructus is introduced for the fresh peel directed to be used in the preparation of Tinct. Aurantii Recentis. Fruit merchants consider the fruit in perfection in the months of February, March, and April: pharmacists should therefore prepare their stock of tincture for the ensuing year as soon as possible.

Bismuth Oxidum is introduced with a view to its use in subsequent Pharmacopœias. Solution of citrate of bismuth and ammonia is the preparation for which it is, no doubt, intended, by a manipulation very similar to that given by Wood (*Pharmaceutical Journal*, September 16, 1871). A liquor thus prepared is free from the impurities common in the present officinal solution, which process is seldom if ever resorted to by manufacturers. This oxide can be obtained by boiling basic nitrate with caustic soda solution, 80 parts being produced from 100 of the nitrate.

Calcis Hypophosphis and **Soda Hypophosphis** are already in considerable use in medicine; they may be said to have forced their way into the Pharmacopœia, from the fact that their medicinal value is acknowledged on all sides.

We shall doubtless in forthcoming editions hear more of these, in the form of syrup or other convenient modes of administration, and if not of these, probably of a ferruginous syrup with hypophosphorous acid (*syrupus ferri hyphosphitis*). This latter is now in demand, and may most rapidly and advantageously be prepared by Wood's process (*Pharmaceutical Journal*, vol. ix., p. 461).

While we are speaking of acids of phosphorus, I should like to draw attention to the advantages in using a phosphoric acid of greater strength than the 10 per cent. solution now officinal, for the manufacture of a certain class of preparations now in considerable demand, with a view of introducing it into the Pharmacopœia on a future occasion. I would employ a 50 per cent. solution at least (specific gravity, about 1·500) as described by Carteighe (*Pharmaceutical Journal*, March 26, 1871.)

I am tempted to again dwell upon a preparation containing the element phosphorus, which seems to be playing an important part in the medical treatment of the present "high pressure" days.

The preparation to which I would refer, perhaps, will be thought by some to savour of quackery, but still it is in enormous demand. The public, who are generally keen observers of the value of such remedies, attach great importance to it, but whether their views are wholly corroborated by the medical profession I am not prepared to say. It will be sufficient to remark that it is one of those compounds which are dubbed by our American cousins (the *Lancet* styles some of the addendum preparations in the same way) as "elegant pharmacy." The compound syrup of the phosphates, known popularly as Parrish's Syrup, is the preparation to which I refer, and my own view is, that the sooner we have an official formula for it the better. Why not this, as well as citro-tartrate of soda, which was introduced to imitate a well-known preparation, and to keep pace with the public taste for physic?

Charta Sinapis.—Mustard leaves, as they are termed in trade, were made official in the last United States' Pharmacopœia; our process is almost identical with the American, and both are imitations of Rigollot's Mustard Leaves, which have been in considerable demand.

It will require dexterity and practice before one can make the elegant leaves of the French manufacturer.

The American Pharmacopœia directs the spreading of the solution of gutta percha and mustard with a brush, while the British Pharmacopœia, with the same viscidity of the gutta percha solution, directs the passing of the paper on one side over the mixture.

Chloral Hydras.—Although known to the chemist from the earlier days of Liebig, still it was not until some four years since that it was brought forward as a remedial agent. It has been in large demand (not in the quantities the newspapers stated), and although perhaps less is used now than a year since, still my own observation convinces me that it is maintaining its ground. At first our market was wholly supplied from the Continent, but eventually, thanks to the enterprise of an English firm of manufacturing chemists,* it was produced at home. Its import in considerable quantity was viewed with a jealous eye by the Customs, who attached a duty of fifteen pence per pound to it.

For a considerable period the chloral hydrate of pharmacy was found wholly in masses; now, however, detached crystals, ranging from the size of large crystals of sulphate of magnesia to those of chlorate of potash, are met with, but these are wholly of continental manufacture. I am informed that English makers, presuming that these are now required by the description given in the addendum of chloral hydrate, are quite prepared to undertake their manufacture.

The Pharmacopœia Committee does not undertake to be a manufacturer's encyclopedia, still it would, I think, have been advisable to state the particular liquid from which chloral hydrate may be crystallised.

The characters and tests enumerated are ample to decide the purity of good chloral hydrate, the boiling point of 205° and Wood's quantitative chloroform test (*Pharm. Journ.*, March 4, 1871) being those chiefly to be relied upon.

Extractum Glycyrrhizæ Liquidum is certainly a preparation of which both prescribers and dispensers stood in need.

When it was first introduced to our notice within these walls by Professor Redwood, who at the same time brought forward other United States' Pharmacopœia preparations, we were told that glycerine and proof spirit would be the liquids by which the fluid extract would be preserved, and that the starting point would be extract of liquorice, and not liquorice in powder as there directed. It appears, however, to have been decreed that we shall not be afflicted with "the glycerine mania" prevalent on the other side of the Atlantic, for the glycerine has been discarded, the extract of liquorice replaced by the root, and the spirit only retained, and that in very small quantity.

That a fluid extract shall be made from the root direct is certainly more like "artistic pharmacy" than dissolving the

* Foot, Barrett & Temple, Battersea.

ract in water. That there will be no lamentation over the ction of the glycerine few will question, but that the pre- rative action of 11 per cent. of rectified spirit will be suffi- t to prevent acetous fermentation I much question. Time observation only will decide this matter. Experiments I e made with this fluid extract give the following results from parts :—

Dried Liquorice Root	100 parts
Solid Extract (B. P.)	26 ,,
Extract Fluid (sp. gr. 1·160)	56 ,,
Extract Glycyr. Liquid (B.P.)	61 ,,

his latter, when complete, has a specific gravity of 1·130, ch information might have been appended with advantage the Pharmacopœia description, thereby giving an opportunity one determining what the density of the completed extract ld be.

Gutta Percha is a body with which pharmacists hitherto e not had experience. I would call attention to the impurity uch of the gutta percha of commerce, and the variation of per cent. in price.

Hydrargyri Oxidum Flavum is a preparation with which ave been for some time familiar, not only for use in oint- ts, but as the mercuric oxide used in the preparation of the able oleates of mercury.

hese latter, perhaps, may find favour on a future occasion, n they have been more extensively tried, and when the acid of pharmacy is other than the rough oleic acid of the le factories.

Injectio Morphiæ Hypodermica is a preparation of h various solutions have from time to time been used, the test being probably the official solution, and the strongest of ten grains to the fluid drachm. This latter is the one scribed in Squire's work on hospital formulæ, and has aps been more generally used than any other. The pre- tion now official has a strength of five grains to the fluid hm.

confess I am an admirer of the method by which this solu- is directed to be made; it is practically and theoretically d and likely to produce uniform results, provided always its preparation by a good manipulator can be ensured.

have, however, my misgivings on this point, and imagine frequently such good results will not be obtained as might been expected had the solution been directed to be prepared acetate of morphia direct, even with all its faults, and especially if required hurriedly, which will doubtless often e case.

had almost made up my mind that at any rate for all things n medicine we should count by ten and not twelve. Had ne so in this instance, we should have had a solution of rain in ten minims: the continental pharmacist would then been able to almost "run and read," as it were, and dis- easily his decigramme of morphia salt to his c. c. of solu- when an English prescription was presented.

Quillaiæ Cortex is ordered for the production of tincture of bark, not altogether unknown in pharmacy. At the nt time two or three spurious larch barks are to be found de.

Liquor Gutta Percha.—This solution is introduced as a e for the powder of black mustard in making the Charta is. The formula is identical with that given in the recent n of the U.S. Pharmacopœia. If gutta percha is of good y and thinly cut, as the Pharmacopœia directs, its solution st easily effected. The carbonate of lead acts as a nical purifier, and answers the purpose excellently well. benzole been official, doubtless it would have replaced form in this preparation.

Liquor Magnesiæ Citratis is introduced as a preparation ming true citrate of magnesia, and is made by a modifica- f the French Codex process for purgative lemonade. The ic acid is generated from acid carbonate of potassium : the directs the use of the corresponding soda salt. The thereby charged with carbonic acid is under less pressure the ordinary lemonade of trade, which contains generally filled from a machine 2·5 atmospheres of gas. This would not contain more than 1·5 atmospheres in ad- to the quantity dissolved by the water. There is just nt to make it grateful, and not too much to prevent it eing easily taken as a draught. I should have preferred to have seen half a fluid ounce of simple syrup, with half a drachm of tincture of fresh lemon peel, ordered for each half-pint bottle, rather than syrup of lemon, which has, to my palate, a mawkish taste.

Oleum Phosphoratum is made with almond oil, which is first directed to be heated to 300° Fahr., and maintained at that temperature for fifteen minutes. In some cases such treatment of the oil may be necessary, but I have not noticed either water or albuminous matter in the almond oil with which I have experimented. Almond oil readily takes up the phosphorus when the required temperature of 180° (Fahr.) is maintained. The oil now official differs in strength from the phosphorated oil of the Codex, which contains 2 per cent. Presuming the specific gravity of almond oil to be ·920, ·74 then will be the percentage of phosphorus. Surely a 1 per cent. solution would have been preferable. I do not consider the description of "colourless" correct for this liquid. I should describe it as straw-coloured.

Pepsin.—At last this preparation is made official, and a standard published by which the value of medicinal pepsin can be determined.

How much of the pepsin of trade will come up to the official test is a matter of speculation.

I have prepared pepsin from fresh rennets, but have not yet had an opportunity of experimenting upon pepsin either from pigs' or sheeps' stomachs.

It is imperative that the directions of the Pharmacopœia as to washing be strictly adhered to; and I should say, profiting by a failure I had on the first occasion, the scraping even of the stomach is a matter of importance, for a material point seems to be the sufficiently light scraping in order that the fatty matter be not removed with the viscid pulp, which is finally converted into a solid form by dessication at a temperature of 100° Fahr. The powdering of the gelatinous-looking pellicles is a matter easily to be accomplished, the result being "a light yellowish-brown powder, having a faint, but not disagreeable odour, and a slightly saline taste, without any indication of putrescence."

The determination of its value by its solvent action upon fifty times its weight of coagulated egg albumen aided by a minute quantity of hydrochloric acid is, I believe, in the main correct. That the albumen will dissolve there can be no question: the time mentioned, viz., four hours, seems to me, for, at any rate, pepsin from the stomach of the calf, to be rather too short. The experiment I made took a longer time; it is, however, just possible that pepsin made from a pig's stomach may have a more rapid action upon albumen.

Pilula Phosphori.—Phosphorus is not one of the most manageable bodies to convert into a form suitable for administration and easy dispensing. We must not, therefore, be surprised if some complaints are made upon the practicability of the method for preparing this mass. My experience in making phosphorus preparations has been limited. I will therefore merely say that, as far as I can judge, the directions, accompanied with considerable care and patience, give a very satisfactory result. To make the wax thoroughly incorporate with the balsam of tolu and phosphorus is the part of the process that seems most tedious. Upon a quantitative experiment I have made I find, when operating upon about half a pound of the ingredients, that the weight is finally increased about 13 per cent. on account of the water absorbed by the mass during the immersion and manipulation. This hydration, therefore, will give an amount of phosphorus present in the completed product equal to about 1 per cent.

Pilula Scammonii Composita is the non-aloetic cathartic mass promised to be inserted in the appendix. It is to be supposed that the curd soap here ordered will replace the olive oil soap in most preparations in which the latter is now prescribed in all future editions of the Pharmacopœia. The use of spirit as a solvent, combined with strong tincture of ginger, leaves little to be desired as far as the production of an elegant mass is concerned; but the process is rather an expensive one, and the essence of ginger might have been replaced by the oleo-resin of ginger (or gingerine as it is called in trade), now official in the U.S. Pharmacopœia, which would in this case have answered the purpose exceedingly well.

Pulvis Elaterii Compositus commends itself immediately as a safe and ready means of dispensing elaterium.

Pulvis Glycyrrhizæ Compositus is somewhat different to the compound liquorice powder we have been accustomed to see

prescribed latterly, which was that of the Prussian Pharmacopœia, containing, in addition to the British Pharmacopœia ingredients, sulphur and fennel fruit; doubtless those in charge of the work have strong reasons for rejecting the sulphur.

Sapo Animalis.—The introduction of this soap into the Pharmacopœia is a wise step even if only to authorise a practice common with manufacturers, who have been fully cognizant of the objections to the olive oil soap of the Pharmacopœia for some years. The remark, that "this soap may with advantage be substituted for the hard soap made with olive oil in preparing Linimentum Potassii Iodidi cum Sapone" is not the least too strong, for it is absolutely necessary, if anything approaching a good liniment be required, that the official olive oil soap be discarded. How manifest is the disadvantage under which the compilers labour in having to publish an appendix only, without revision of the text of the old work: for a parallel can be found for this remark upon the soap over and over again in looking through the Pharmacopœia and comparing it with the work of pharmacists upon certain subjects to which they have given their attention since the 1867 was introduced, but which cannot appear because of material alterations that would be necessary in the text.

Succus Belladonnæ belongs to a class of preparations which have for years been in some demand. They are really valuable, and as a rule much more to be relied upon than solid extracts. Of course a hard and fast rule cannot be laid down as to the relative equivalent value of this or other juices as compared with the original plant or with the extract, but the following, I think, will nearly express the average ratios:—

Belladonna herb, fresh	100 parts.
Expressed Juice	60 ,,
Solid Extract	4·7 ,,

Succus Hyoscyami.—The same remarks apply as to the preceding juice, but perhaps here to a stronger degree upon the greater objection to evaporation, for I am of opinion that expressed juice of henbane suffers considerably in evaporation for the production of the solid extract.

The relative equivalent values of herb, juice, and extract will probably be as under:—

Henbane herb, fresh	100 parts.
Expressed Juice	70 ,,
Solid Extract	4·4 ,,

These expressed juices seem to have a specific gravity of about ·990 to ·997.

Suppositories.—My experience in the manufacture of suppositories is very small. Martindale, Gerrard, and other practical men can speak more authoritatively upon the subject than I can; doubtless they will give us the benefit of their observations in manipulating the three soap suppositories.

The irritant nature of the soap upon surfaces with which it comes in contact is purely a medical question, and does not concern us.

The *Carbolic Acid and Soap Suppository* does not work well, the quantity of moisture, being alone derived from the carbolic acid, seems to me insufficient; at any rate, it will not admit of starch being used. To make these easily I should take equal parts of curd soap and curd soap in powder.

The *Suppository of Morphia and Soap* is easily manipulated, the quantity of starch added being sufficient to make the suppository finally weigh 16½ grains.

The *Suppository of Tannic Acid and Soap* is also easily made, the amount of starch added being sufficient to make the suppository weigh upwards of 23½ grains.

The two latter suppositories, on exposure to damp air, might be expected to become slightly adhesive from the use of the hygroscopic body glycerine.

Syrupus Chloral.—The administration of hydrate of chloral in the form of a syrup has been general during the past two or three years. When it was first used in this form the variously-flavoured syrups were numerous; amongst them might be enumerated orange-peel, orange flower, peppermint, tolu, ginger, chloroform water. It would have been well if, at the evening meeting some two or three years since, when it was proposed to settle the question of the best vehicle for its administration, that the matter had been decided; the syrup would not then have been sent through the country broadcast made from half-a-dozen different formulæ, but a recipe would have appeared in the Journal as having had the approval of the meeting, and would consequently have carried some weight with it. It would seem that this difficulty finally beset the Pharmacopœia committee, for they have settled upon simple syrup, hoping by its adoption to prevent all chance of giving offence to one or other who have held that such and such a flavouring is the most elegant.

All this is very good, and under the circumstances is perhaps the best solution of the difficulty that could have been devised, and I admire it. I cannot say as much for the elegance of the syrup itself, for, to a pharmacist's eye, it is anything but a syrup.

The formula given contains too much water for the solution of the hydrate before the simple syrup is added, the resulting compound being thin and certainly unparalleled in density by any other official syrup. When prepared according to the Pharmacopœia formula the sp. gr. will be 1·218. I should certainly suggest, when an opportunity occurs for revision, that we are directed to dissolve the hydrate in about its own weight of water and then add simple syrup, thus—

Hydrate of Chloral	80 grains.
Water	1½ drachms.
Syrup to	1 fluid ounce.

The sp. gr. of such a syrup would be 1·320, and would be an improvement, at any rate pharmaceutically, upon the new official syrup. It may be that there are some who are so fastidious that they object to the taste of sugar: if that be the case let a solution in water only be made official, of an equivalent strength of 10 grains to the drachm.

Tinctura Aurantii Recentis is an old friend, for grey-haired pharmacists will remember that a tincture from the fresh peel, although not of equivalent strength to the present, was official in the 1824 Pharmacopœia, and was discarded for reasons best known to the compilers of the 1836 edition. We are certain they did not then cherish the now popular notion of conservatism, or they would have retained the formula for the present race of pharmacists, who perhaps wish they had done so, rather than they themselves should be accused of retrograde pharmacy. The subject was revived before this Society at an evening meeting by Haselden as one worthy of attention (*Pharm. Journal*, Nov. 9, 1872). The discussion upon the paper, in which Bland, Brown, Greenish, Groves, Sandford, and Umney took part (*Pharm. Journal*, Nov. 9, 1872), went to show as follows:—

Bland—"That tincture of dried peel was a bitter, while tincture of fresh was a flavour only."

Brown—"That upon no account would he use rectified spirits."

Greenish—"That continental pharmacists used dried peel of double strength."

Groves—"That he had experimented upon all peels, and finally came back to the dried by preference."

Sandford—"That he used a tincture approximating to the 1824 tincture."

Umney—"The difficulty there would be at certain times procuring fresh Seville orange peel."

This discussion apparently would not have resulted in the introduction of this tincture if these pharmacists had a voice in the matter. Symes (*Pharm. Journal*, Nov. 9, 1872, p. 381) makes remarks upon this tincture, and suggests the addition of as much water as, with the water in the peel, would bring the spirit to proof strength, but none of these experimenters seem to have fallen into the error the British Pharmacopœia has in the manipulation there directed.

We are told to macerate the 6 ozs. orange peel in one pint of rectified spirit for a week, with frequent agitation. Then express the dregs, mix the products, and make up the measure to a pint with rectified spirit.

The introduction of the word "pint" into the text is evidently an error, and seems to have crept in inadvertently, for we are directed only a few lines previously to take a "sufficiency" of spirit, which remark would have been unnecessary, or at any rate contrary to custom, if a pint had been intended. I have had an opportunity of making this tincture during the past fortnight, and have found rather than spirit being required to make up any deficiency resulting from loss, there is actually a gain of about 10 per cent. by volume. The formula should therefore, be amended thus:—

Take of—

Bitter Orange	A sufficiency
Rectified Spirit	18 fluid ounces, or a sufficiency.

refully cut from the orange the coloured part of the rind in slices, and macerate six ounces of this in eighteen fluid s, &c., &c. Finally, add sufficient spirit to make one pint. ould also remark that my observations confirm those of den and Symes, that fresh peel is to dry peel as 33·3.

nctura Laricis has previously been but little used; when , the tincture has generally been made with proof spirit. the bark in a proper state of division, percolation is ably adapted for the production of this tincture. The f spirit I have noted in making it by the official method ut 10 per cent. by volume.

ct. Quiniæ Ammoniata has been seldom heard of pre- y. The formula given is one that has appeared in the *n. Journal*, and has doubtless been adopted by those who had occasion to prepare the solution. The specific gravity is ·936. One fluid ounce of this tincture, when evapo- to dryness over a water bath, re-dissolved in one fluid of water, and ammonia cautiously added in slight excess, ive a precipitate which, when dried until it ceases to lose t, will weigh not less than 5·6 grains.

o preparations are conspicuous by their absence. I refer acetum and oxymel of ipecacuanha. These were intro- to us by Dr. Duckworth, and working processes given by ghe, and over and over again they were said to be destined addendum.

at has become of them? Is it possible that they kept tly up to a certain time, and then suddenly went the way ipecacuanha preparations. I imagine that this must have he case, for we heard of them at every meeting at which ditions to the Pharmacopœia came under discussion, and they are shut out.

uld submit that if these have been found unstable, an alcoholic fluid extract be prepared and investigated, with to its use in future editions, either as fluid extract, or enerally for a syrup, by dilution of the fluid extract with syrup.

conclusion, I would now review the first page, entitled, ections made in 1874 in the Reprint of the British Phar- œia of 1867."

only important correction is the specific gravity of the solution of perchloride of iron, which was formerly to be 1·338, now to be 1·440, which is, I believe, nearly e.

tincture made by diluting this liquor with rectified and for which a specific gravity was named in the pre- print, has been deemed either accurate or unworthy of ion.

list in the main consists of the proportions of active ents in various more or less potent preparations. Up to sent time I have not had an opportunity of checking alculations.

uld, however, point out one anomaly in which ipecacu- nd opium, both of which are in the ratio of one in ten r's powder, are said to be respectively as one in twenty- d one in twenty-three and a half, nearly, in compound pecacuanha and squill.

o I sympathise with the compilers in the difficult task ave had in making corrections without disturbing the the old print, to which point I have previously alluded, annot refrain from expressing my humble opinion that ctions, almost the whole of which are immaterial, have de, while more important points have been allowed to unassailed, it would have been better had that list never blished.

n the novelty of this book has passed away, we shall ward to a new edition of our National Pharmacopœia, ill doubtless bear a decennial revision. In the mean- it be not only the ambition, but the bounden duty of harmacist to make some research, no matter in what n, if it bears upon pharmacy, and give this society the of his observations; by this, and this only, shall we be to keep pace with pharmacists on the Continent and in ted States, and, what is of more importance, show to the profession that we are fully alive to the responsibilities alling.

Mr. Umney had finished his paper the hour was too d to commence a discussion, which would probably have r into the night. It was, therefore, resolved to adjourn ing until the first Wednesday in May, when it is ex- pected that Dr. Redwood will reply to the criticisms on the Appendix which are brought forward. But before separating Mr. Bottle called attention to the fact that there were two distinct "Appendices" in circulation; at least two quite different in their contents had been sold to him. It was explained by Dr. Redwood that this must have arisen from an error on the part of the printers in sending for binding certain of the early proof sheets along with those which were ultimately passed.

CHEMICAL SOCIETY.

Thursday, March 19, 1874.

PROCEEDINGS of the Chemical Society. Professor Odling, F.R.S., President, in the chair.

After the ordinary business of the Society was completed, the President called on Professor Dewar to deliver his lecture "On Dissociation." The lecturer premised that as he had but little that was new to tell he must content himself with condensing and epitomising the results of others. After briefly referring to the theories of Priestley and Hutton, he described the famous experiments of Sir James Hall, who obtained a substance identical with marble by fusing carbonate of lime under pressure. He next noticed Grove's discovery that water was decomposed at a lower temperature than that produced by the union of oxygen and hydrogen, and then explained the masterly researches of Deville on the effect of heat in causing the dissociation of carbonic anhydride, carbonic oxide, water, &c. After this the lecturer showed that in dissociation the tension of the vapour evolved is constant for a given temperature, and independent of the mass, illustrating it by Debray's experiments on the decomposition of carbonate of lime at a regulated heat, and the evolution of water from certain hydrated salts. The lecture, which was illustrated with diagrams of various curves of tension, concluded with some remarks on the dissociation of the compound of hydrogen and palladium, and with a description of an apparatus devised by the speaker for ascertaining the temperature produced by the explosion of a mixture of oxygen and hydrogen under various pressures. The meeting then adjourned until Monday, March 30, the anniversary meeting.

Thursday April 2, 1874.

After the transaction of the usual business of the Society, Papers "On Sulphocyanide of Ammonium and Sulphocyanogen," by Dr. T. L. Phipson, and a "Note on a Reaction of Gallic Acid," by H. R. Procter, were read by the Secretary. Mr. Procter finds that a mixture of gallic acid and potassium arsenate when exposed to the air acquires a beautiful green colour. Mr. W. Noel Hartley then read a memoir "On Cobalt Bromides and Iodides," in which he described the method of preparation and properties of these compounds. They closely resemble the corresponding chlorides. Fine specimens of the different salts were exhibited by the author. Mr. E. Nelson read a paper on "The Distillation of Sodium Ricinoleate," and Mr. C. H. Piesse a "Note on the Solubility of Plumbic Chloride in Glycerine." Mr. Kingzett had a voluminous communication "On Ozone as a Concomitant of the Oxidation of the Essential Oils," Part I., and from his experiments he infers that the compound produced during the oxidation of oil of turpentine is neither ozone nor hydrogen peroxide, but a hydrated oxide of turpentine. The last Paper was on the "Action of Chloride of Benzyl on Camphor," Part II., by Dr. D. Tommasi.

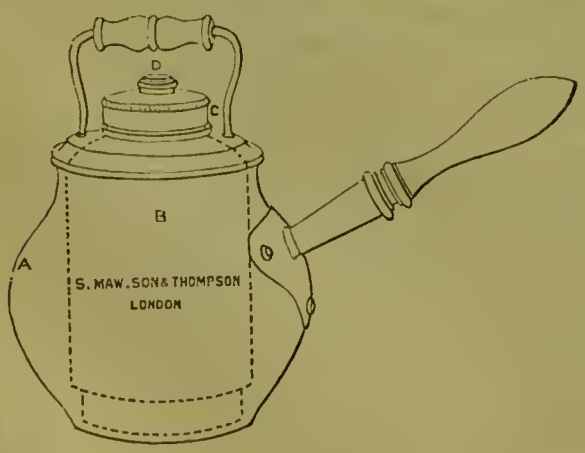
The meeting then adjourned until Thursday, April 16, when communications will be read "On Isomeric Terpenes and their Derivatives, Part IV., Oil of Cajeput," by Dr. C. R. A. Wright and "On the Constitution of Urea," by Dr. D. Tommasi.

KIRBY'S SOLID GLYCEROLES.

Messrs. H. & T. Kirby & Co., of Newman Street, Oxford Street, whose pearl-coated phosphorus and other pills have already brought them into acquaintance with the trade, have lately pateuted a new form of lozenge which is particularly worth the attention of chemists and druggists. The object of these "glyceroles" is to provide a medium for the administration of certain medicines more conveuient and efficient than the hard form of lozenge, or than those compounded with sugar and gum. By a combination of glycerine with isinglass, according to a process which has been patented, Messrs. Kirby produce a clear and very handsome-looking sort of jelly, which is quite solid enough to retain its consistence, but which dissolves gradually in the mouth. With this substance various kinds of medicines can be readily incorporated, and by the antiseptic powers of the glycerine will perfectly retain their virtues. The first group of remedies to which this form of administration has been applied is such as are especially applicable to diseases of the throat, as, for example, borax, carbolic acid, catechu, chlorate of potash, kino, and taunic acid. The gradual solution and the aid of the glycerine are decided advantages which are obtained by this form of administration. But it is also found that the glyceroles are of considerable service for the administration of medicines which are generally taken in the form of pills or powders, such as bismuth, calomel, camphor, guaiacum, aloes, reduced iron, morphia, carbonate of lithia, scammony, and various compounds. Before the taste of anything but the glycerine is apparent the troches can be swallowed quite readily; thus, for children, powders all ready mixed with the best sort of jelly in the most perfect manner can be dispensed. Messrs. Kirby (the inventors) are disposed to offer liberal terms to chemists as licensees of their method for the general dispensing of medicines in this form. Of this they will probably make an early announcement. Our object on this occasion is simply to call attention to these elegant preparations.

MAW'S BEEF TEA APPARATUS.

The desirability of an apparatus which will uniformly and completely extract all the nourishment from meat without burning it has been felt both by cooks and medical men. Messrs. S. Maw, Son & Thompson have devised a construction from suggestions of Dr. Leared, which seems to surmount all difficulties. The meat, free from fat, bone, and gristle, is placed into the jar B, which stands in the boiler A surrounded by water. The jar



is securely sealed by a screw cover C, while a safety valve D allows for the expansion of the air. The apparatus is then set on the fire and boiled for two or three hours. The result from a pound of beef and eight ounces of water is thirteen ounces of very rich beef tea, which contains, as it would appear, all the nutritive constituents of the meat.

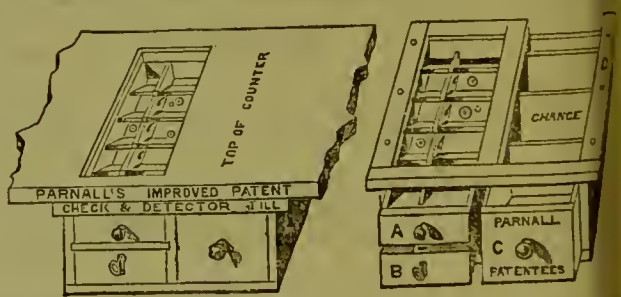
HARVEY'S TOOTH-ACHE PENCIL.

The Tooth-ache Pencil introduced by Messrs. Bourne & Taylor deserves a word of comment for the very attractive style in which it is introduced. The pencils contain some tooth-ache

elixir, and present a method of ready application. They are made of coloured glass, and, a dozen mounted on a card, forming a very effective photograph, are most certain to attract attention.

PARNALL'S CHECK TILL.

The Patent Till invented by Messrs. Parnall & Sons, of Bris though not quite new, we believe is now for the first time i



troduced to chemists. Its operation is very simple. The c drawer contains a counted supply of change. The nearer is so constructed that each time it is opened the coin last into it is pushed forward one compartment until at last it into the locked receptacle below. There can be no mecha construction which will make rogues honest, but this till tainly has the effect of removing the temptation which re dealers must often feel to exist in leaving an open till of counted money. A glass top is supplied with the till, the ob being to save the disputes which occasionally arise with tomers on the subject of half-crowns and florins.

LINSEED LEAVES.

It is possible that the success of Rigollot's Mustard Leaves had something to do with the introduction of Hamilton's "T Cataplasme." The latter is a French specialty which has be lately introduced into England. It seems to be a canv saturated with a sort of dried and concentrated linseed pulp. application is very easy, and we have been informed by cert pharmaciens who have had considerable experience with it th it has been found singularly efficient.

following list has been compiled expressly for the CHEMIST AND GGIST by L. de Fontainemoreau & Co., Patent Agents, 4 South Street, sbury, London; 10 Rue de la Fidélité, Paris; and 33 Rue des limes, Brussels.]

visional Protection for six months has been granted for the ing :—

J. Hickisson, of Southgate Road, Hackney, marking ink manufacturer. Improvements in the means of, or apparatus for, stopping or stoppering bottles, jars, and other vessels of capacity. Dated January 22, 1874.

H. Pochet, of 66 Rue Jean Jacques Rousseau, Paris, manufacturer. An improved bottle-stopper and drinking vessel combined. Dated February 13, 1874.

A. R. Burman and M. de Frece, of Liverpool. Improvements in portable ether and perfume sprayers. Dated February 16, 1874.

W. Clark, of London. Improvements in invalid bedsteads. Dated February 16, 1874.

N. Thompson, of Southampton Buildings, marine engineer. Improvements in means for stopping bottles, jars, and other hollow articles, which invention is applicable to means for connecting together tubes and other articles. Dated February 14, 1874.

L. R. R. Comte de Beaurepaire de Louvagny, of 23 Boulevard de Strasbourg, Paris. Improvements in purifying alcohol, and in the apparatus employed therein. Dated February 17, 1874.

A. Piver, of 10 Boulevard de Strasbourg, Paris, perfumery manufacturer. Improvements in the distillation of essential oils, or perfumes. Dated February 19, 1874.

G. Stenhouse, of Rodney Street, Pentonville, analytical chemist. Improvements in the manufacture of sugar, and in purifying saccharine solutions. Dated February 20, 1874.

H. Y. D. Scott, of Ealing. Improvements in the treatment of sewage, and in the manufacture of manures therefrom. Dated February 20, 1874.

S. H. Johnson, of Lea Bank Works, Stratford, Essex, chemist. Improvements in the construction of furnaces and retorts for the manufacture of bisulphide of carbon. Dated February 23, 1874.

E. Hunt, of Glasgow. Improvements in bottles and stoppers for aërated liquids. Dated February 24, 1874.

S. Warner, of Liverpool, and S. Stanton, of Southampton Row. Improvements in invalid bedsteads. Dated March 3, 1874.

W. E. Gedge, of London. An improved mode of, and apparatus for, stopping bottles. Dated March 5, 1874.

C. Eastwood, of Luddenden Foot, Halifax, York, gardener. Improvements in bottles and in stoppers for such bottles. Dated March 6, 1874.

W. Hunt, of Castleford, near Normanton, York, manufacturing chemist. Improvements in the manufacture of sulphate of soda and sulphate of potash, and in apparatus used in the said manufacture. Dated March 6, 1874.

G. J. Hinde, of Wolverhampton, Stafford, manager of works. Improvements in utilising a certain waste or residual product obtained in the manufacture of aniline dyes. Dated March 11, 1874.

J. H. Johnson, of London. Improvements in the manufacture of manures and in the apparatus employed therein. Dated March 11, 1874.

ers Patent have been issued for the following :—

D. Mackay, Doctor of Medicine, of 1 Inglis Street, Inverness. A new or improved manufacture of omphalic blisters. Dated September 3, 1873.

W. R. Lake, of London. Improvements in adjustable brackets for use in dental operations, supporting reading and writing desks and the like for other similar purposes. Dated September 13, 1873.

C. D. Abel, of London. A new blue dye or colouring matter. Dated September 19, 1873.

A. Hess, of Dunster House, Mincing Lane, manufacturing chemist. Improvements in apparatus for extracting oils and fatty matters from animal and vegetable substances, and for recovering the solvent used therein. Dated November 13, 1873.

J. Clarkson, of Islington, dentist. Improved means of fastening, connecting, or securing artificial teeth. Dated December 3, 1873.

J. Paterson, of Leyton, Essex. Improvements in machinery or apparatus for capsuling bottles and other vessels. Dated January 3, 1874.

J. F. Corkran, of 110 Cannon Street. An improved manure. Dated January 7, 1874.

92. C. E. Blake, of San Francisco, California, United States, dentist. Improvements in dentistry, the same consisting in a means of disguising the bright colour of gold filling for teeth, whereby said filling is also rendered more durable; and also of an improved metallic foil, for dental purposes. Dated January 7, 1874.

Specifications published during the month :—

Postage, 1*d.* each extra.

1873.

2166. T. Murphy. Machinery for cutting stoppers for bottles, &c. 10*d.*

2318. J. Haithwaite. Extracting chlorine from chloride of lime. 10*d.*

2343. F. R. Hoghton. Instrument for treating deafness, &c. 6*d.*

2449. W. Weldon. Absorbing dilute chlorine. 10*d.*

2463. J. Hickisson. Teats, rings, &c., for infants. 8*d.*

2483. S. H. F. Cox. Separating matters of different specific gravities. 10*d.*

2484. A. de Saldana and others. Production of citric acid, tartaric acid, and alcohol. 4*d.*

2516. J. Arnold. Bandages, padding, &c. 4*d.*

2608. A. A. Croll and another. Treating sulphur ores. 4*d.*

2631. E. La P. Daniels. Abdominal support and substitute for garters. 4*d.*

2638. J. Leigh. Manufacture of manure. 4*d.*

2662. C. Rawson and others. Manufacture of manure. 6*d.*

ARRANGEMENTS OR COMPOSITIONS.

Notices of first meetings have been issued in *re* the following estates. The dates are those of the petition :—

BENSON, GEORGE WILLIAM, Welchpool, druggist and victualler. Mar. 31.

BLAKE, JOSEPH NICHOLSON, Taunton, surgeon. Mar. 18.

BUCHAN, CHARLES FORBES, Bridgewater, late Washington, surgeon. Mar. 16.

DYER, ANDREW, Cardiff Road, Aberdare, surgeon. Mar. 30.

HUGHES, HENRY AND JAMES, 72 Ashton Old Road, Ardwick, near Manchester, dyewood grinders. Mar. 26.

LLOYD, THOMAS EDWIN, St. Mary's Road, Garston, near Liverpool, chemist. Mar. 13.

NORTH, BENJAMIN, trading as JOSEPH SHAW & Co., Longroyd Bridge and Fartown, both Huddersfield, dry soap and soap ash manufacturer. Mar. 14.

NORTON, SELBY, 12 Queen Victoria Street, and Putney Hill, Putney, M.D., and medical agent. Mar. 19.

POOLE, CLEMENT WM., trading as GEORGE BARTH & Co., 26 Duke Street, Bloomsbury, chemist. Mar. 18.

RIDSDALE, GEORGE, 35 Euston Square, surgeon and physician. Mar 9.

WARD, HENRY LEA, Middlewich, chemist. Mar. 10.

WRIGHT, HENRY RICHARD, Knaresborough, surgeon. Mar. 20.

BANKRUPTCY CLOSED.

GILLIES, ELIZABETH, Halifax, physician (a dividend of 2*s.* 10*d.* has been paid). Bankruptcy closed Mar. 19.

PARTNERSHIPS DISSOLVED.

BARRETT & CODD, trading as THE MALVERN MINERAL WATER COMPANY, Grove Lane, Camberwell. April 1.

CALEY & CORDER, Norwich, chemists. Mar. 17. Debts by Octavius Corder.

CAMPBELL & Co., Glasgow and Paisley, chemical manufacturers. Feb. 28. As regards Thomas F. Haldane.

ELLIS, JOSEPH, SON & PARAMORE, Spring Street, Sheffield, surgical instrument manufacturers. Jan. 31. Debts by William Paramore.

FARAKER & SHAW, 10 Plough Road, Rotherhithe, and 3 Union Street, Deptford, surgeons. Jan. 1.

GILES & LETT, Great Coggeshall, surgeons. Feb. 19.

HARROP, WADE & MILNES, Kirkgate, Wakefield, soothing syrup manufacturers. Aug. 1.

KEELING, COLLENS & Co., Dartmouth Street, Birmingham, chemists and metallurgists. As regards Edward Collens. Mar. 3.

LEMALE & Co., Chandos Street, Covent Garden, manufacturers of mineral teeth and dentists' materials. Dec. 31. Debts by Thomas Fawssett.

MARTYN & PEDLER, 6 Trevor Terrace, Knightsbridge, surgeons. Sept. 25.

MCLEISH, WILLIAM, & SONS, Ballymacarret, Down, manufacturing chemists. Mar. 23.

PAYNE & CHAPMAN, Piccadilly, Manchester, chemists. Mar. 25. Debts by John B. Payne.

SCOTT & PEIRSON, Holbeck, Leeds, surgeons. May 26, 1873.

THACKER & HOEFF, Molesworth Place, Dublin, druggists. Feb. 12.

WHITEHOUSE & GILLIES, Maryland Point, and Ilford Road, Essex, M.D.'s. Dec. 25. Debts by Thomas G. Whitehouse.

WHITWORTH & DENTON, Castleford, Yorkshire, glass bottle manufacturers Feb. 25. Debts by Joseph Whitworth.

THE CHEMIST AND DRUGGIST

COLONIAL BUILDINGS, CANNON ST., LONDON, E.C.

Subscription, 10*s.* per annum, including, at the end of each year, a handsome and valuable diary as a thirteenth number, all post free.

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All Advertisements intended for insertion in the current Month must be sent to the Publisher of The Chemist and Druggist on or before the 12th, except Employers' and Assistants' Advertisements, which can be received up to 10 A.M. on the morning previous to publication.

Subscribers are requested to observe that the receipt of The Chemist and Druggist in a *Green Wrapper* indicates that with that number the term of subscription has expired, and that no further numbers will be sent until the same has been renewed. We issue the notice very respectfully, not that we distrust our Subscribers, but simply because we find it impossible to keep an immense subscription list like that we now have, extending to almost every town in the world, in order, without an exact system like this.

FOREIGN AGENTS.

Adelaide	Messrs.	Faulding and Co.
Auckland	,,	Kempthorne, Prosser, and Co.
Boston, U.S.	,,	Office of "Boston Journal of Chemistry."
Calcutta	,,	Bathgate and Co.
Chicago	,,	W. A. Weed and Co.
Dunedin	,,	Kempthorne, Prosser, and Co.
Melbourne	,,	Felton, Grimwade, and Co.
Montreal	,,	Evans, Mercer, and Co.
New Orleans	,,	E. J. Hart and Co.
New York	Mr.	P. M. Sherwood, 117 John Street.
Philadelphia	,,	W. M. Dickson, 619 Waluut Street.
San Francisco	Messrs.	Bancroft and Co.

Terms for Advertisements over the Leaders may be obtained on application to the Publisher

We beg to inform our foreign subscribers that the partially unstitched condition in which they receive this journal is in accordance with a regulation of the English Post-office. In common with our contemporaries, to all of whom the same law applies, we are totally ignorant of the purpose of this vexatious rule. We have in vain protested privately against a regulation which compels us to appear before our readers somewhat untidily; and now we feel it due to ourselves to make this public explanation.

DOMESTIC FILTRATION.

"With regard to the Silicated Carbon Filters, I have made many experiments upon them, and have been astonished at the energy and rapidity of their action. I passed through a small Filter of this make some of the worst description of water supplied by the London Water Companies, and found it, after filtration, to have become as pure as the very best London water. My experiments show that the Filter exercises a decomposing action—a chemical action—on the Organic Impurities in Drinking Water. I have no doubt that water, which is dangerous from the Organic Matter contained in it, becomes *safe* on passing through the Silicated Carbon Filter. A point of some importance, shown by my experiments, is that a Second Filtration still further improves the quality of Drinking Water. After being in use for a considerable period, Filters lose their power and require renovation. I have found that the passage of a little Hot Water through the Silicated Carbon Filter, and afterwards blowing a little air through it, restores its power."

J. ALFRED WANKLYN, M.R.C.S., London,
Formerly Professor of Chemistry in the London Institution;
Joint Author of a Book on Water Analysis, and of the Ammonia Process.

THE IRISH DRUGGISTS.

We are sorry to observe that the chemists and druggists of Dublin, after making such a good beginning, seem to show signs of faint-heartedness now that they find themselves in the presence of opposition. We are obliged to form a judgment somewhat in the dark, but we confess that we see little or no reason for them to turn back from the work to which they have put their hands. They have made out an excellent case for themselves, and with a certain degree of persistence they would doubtless attain success. No one on earth would maintain that the Apothecaries' Hall curriculum is either necessary or even in all respects suitable to the practice of pharmacy, and the existence of the chemists and druggists as a separate class is a plain

tion that the apothecaries have failed to supply fully the
naceutical requirements of the sister isle. If the Apothe-
' Company is desirous to retain the superintendence of
pharmacy it can do so simply by providing special ex-
tions for pharmacists. But if internal jealousy and
al oppositiou is too strong for the more reasonable section
apothecaries, the next step for the druggists to take
d be, it seems to us, to make overtures to the Pharma-
al Society of Great Britain, which could easily add "and
d" to its title. It would be a real advantage to bring
harmacy of the United Kingdom within one horizon, and
esume our Irish *confreres* are not so enamoured of Home
us to resist such a scheme if it were offered them. Of
the existing rights of the apothecaries would have to be
ted, but unless conditions are very peculiar indeed in
d there can be no reason for the perpetuation in that
ry, alone of all the world, of a system which demands a
al education before a man can be pronounced fit to dis-
a prescription.

e the above was written, it has been announced that the
and Queen's College of Physicians of Ireland has taken
atter in hand, and has drawn up a bill which it proposes
roduce into Parliament. The following is the text of the
sed Bill:—

Whereas a great deficiency exists throughout Ireland of
ishments and shops for the sale of medicines, and com-
ing of prescriptions, and great inconveniences thereby
o the public in many parts of the country:

It is hereby enacted, that from and after the passing of
ct, the provisions of the Pharmacy Acts of England, 15
3 Vict., c. lvi., June 30, 1852; 31 and 32 Vict., c. xxi.,
1, 1868; and 32 and 33 Vict., c. xvii., August 11, 1869,
ended to Ireland as follows:—

That from and after the passing of this Act every person
ualified and registered under the aforesaid Pharmacy Acts,
mists, or chemists and druggists, being thereby entitled to
open shop in Great Britain for the compounding of the
iptions of duly qualified medical practitioners, shall in like
er be deemed to be qualified to keep open shop for the
f medicines and compounding of prescriptions in Ireland,
hall not be subject for so doing to any prosecution or
y, notwithstanding any enactment to the contrary in the
ecaries' Act of Ireland of 1791 (31 Geo. III., cap. xxxiv.)

Moreover, that every person duly registered by the Apothe-
Hall of Ireland as qualified to keep open shop in Ireland
e compounding of prescriptions, shall, in like manner, be
d to be qualified to keep open shop for the compounding
scriptions in Great Britain, and shall not be subject to
nalty for so doing, notwithstanding any enactment to the
ry in the Pharmacy Acts of Great Britain hereinbefore
rated."

practical result of this bill, if passed, would be, of course,
nd the operations of the Pharmaceutical Society of Great
n to Ireland, and it would follow from it that the only
tive for the present chemists and druggists in that country
n registration, otherwise than by passing the curriculum
Apothecaries' Hall, would be to pass the minor examina-
the Pharmaceutical Society. The bill in no way proposes
gnise any right of exemption which the existing druggists
hink they possess, as did the Pharmacy Act when it was
d to Great Britain. It is for the Irish druggists to decide
er they will submit any claim for such exemption, or
er they will join in advocating the passing of the
cians' Bill. As far as we can ascertain, neither the Society
mists and Druggists of Ireland, nor the Pharmaceutical
y of Great Britain, both of which parties are interested in
suggested arrangement, have been consulted in the
r. Neither does it seem just such a measure as we might
would be dictated by the Apothecaries' Company. The
druggists should lose no time in considering this very im-
t proposal.

THE DISPENSING OF MEDICINES AT CO-OPERATIVE STORES.

With much pleasure we note that the *Lancet* has expressed in no uncertain manner an opinion corroborative of that which we have always maintained in respect to the dispensing of medicines at co-operative stores. We quote our contemporary's remarks entire:

"The question has been asked, and it is one that deserves serious consideration, whether the provisions of the Pharmacy Act of 1868 are duly enforced with reference to the sale and dispensing of medicines by co-operative societies. It was the object of that Act not only to prohibit the sale of poisonous drugs by unregistered persons, but to secure to the medical profession and the public the means of having their prescriptions dispensed by educated, examined, and qualified men. The educational arrangements of the Pharmaceutical Society have been in operation for many years, the examinations are, we believe, conducted in a manner calculated to ensure a fair amount of qualification in those who are entitled to registration, and we hear from time to time of the activity of the Society in taking proceedings against unregistered persons for undertaking the responsible duties of dispensers of medicines. But it appears that the proprietors of co-operative stores are allowed to sell and dispense medicines of all sorts without any question as to registration or qualification. We know that some dissatisfaction has been felt on this account, and we think that some explanation is due to those who feel themselves aggrieved. It may, perhaps, be said that qualified assistants are kept at those establishments. But who engages those assistants, and who is responsible for the efficient performance of their work? Ought there not, in cases of that description, to be recognised and registered proprietors who should be responsible for the employment of qualified assistants, and should be themselves qualified to judge, not only of the qualifications of those they employ, but also of the quality of the medicines used, and of the skill and care exercised in dispensing them? If the Pharmacy Act fails to provide the necessary means of protecting the public in these respects there must be some defect in it that we did not suspect.

We should be very glad to see the Pharmaceutical Council resolve on action, and it is to be hoped the prick of the *Lancet* may be supplemented by a gentle extra spur at the annual meeting next month. The Council has sat round a table reckoning the prospects of defeat long enough. If the chances were even it would be worth while trying them; but the stores, by adopting a subterfuge, have virtually confessed that the spirit of the law is on our side, and clearly they could only save themselves by a quibble, a poor staff to depend upon after all. It is likely enough that if the stores saw that the Pharmaceutical Society really meant fighting they would abdicate their position without the formality of a lawsuit.

AN OFFICIAL OPINION ON OPIUM.

The Governor of the Straits Settlements, who must possess ample opportunities for watching the influence of the consumption of opium upon the inhabitants and other persons, observes that the farms existing for the growth of this narcotic owe their value chiefly to the Chinese. To these people he says the drug is an inestimable luxury, and by no means a pernicious one. Cases of extreme indulgence must be rare, as such can scarcely ever be seen. To the energetic, hardworking, muscular Chinaman, his modicum of opium is but a pleasant sedative, no more to him than is his pipe of strong tobacco to the English peasant. Not for one moment can the evils of the use of opium there be compared with the evils of the use of strong drink in Europe. There may be, and doubtless are, men who take opium to excess, but they show none of the misery and the poverty, the debasement and the crime, which in other countries arise from indulgence in liquor.

ELECTION OF MEMBERS OF THE PHARMACEUTICAL COUNCIL.

The annual election for members of the Pharmaceutical Council, which will be held in May next, has called forth a large number of nominations. The following 26 gentlemen have signified their willingness to serve if elected:—

Atkins, Samuel Ralph, Market Place, Salisbury.
Baildon, Henry C., 73 Princes Street, Edinburgh.
Baldock, John Henry, 3 High Street, South Norwood, S.E.
*Bottle, Alexander, 37 Townwall Street, Dover.
Bowor, William, 96 Tottenham Court Road, London, W.
Broad, John, Rise House, Hornsey Rise, N.
Chipperfield, Robert, 50 Oxford Street, Southampton.
Fowler, Stanley, 36 Elgin Crescent, Notting Hill, W.
*Frazer, Daniel, 113 Buchanan Street, Glasgow.
Freeman, Richard, 70 Kennington Park Road, S.E.
*Hampson, Robert, 205 St. John Street Road, E.C.
*Hills, Thomas Hyde, 338 Oxford Street, W.
*Mackay, John, 119 George Street, Edinburgh.
*Owen, John, 51 Holloway Road, N.
Preston, Joseph Classon, 88 Leadenhall Street, E.C.
Rimmington, Felix Marsh, 6 Ivegate, Bradford.
*Robbins, John, 372 Oxford Street, W.
*Sandford, George Webb, 47 Piccadilly, W.
*Schacht, Georgo Frederick, 7 Regent's Place, Clifton.
*Shaw, John, 24 Great George Place, Liverpool.
Stacey, Samuel Lloyd, 300 Holborn, W.C.
*Stoddart, William Walter, 9 North Street, Bristol.
*Sutton, Francis, Bank Plain, Norwich.
Thomas, Richard Wheeler, 10 Pall Mall, S.W.
Turner, Charles Ernest, 63 Great Russell Street, W.C.
*Williams, John, 16 Cross Street, Hatton Garden, E.C.

Those marked with an asterisk are present members of the Council.

The following sixteen members declined to accept office if elected:—

Andrews, Frederick, 23 Loinstor Terrace, Hyde Park, W.
Bell, William Henderson, 96 Albany Street, Regent's Park, N.W.
Bland, John, 51 Penton Street, Pentonville, N.
Burden, Edward, 38 Duke Street, Grosvenor Square, W.
Constance, Edward, 37 Leadenhall Street, E.C.
Faulconer, Robert Stephen, 270 Walworth Road, S.E.
Gulliver, William, 6 Lower Belgrave Street, S.W.
Guyer, James Brett, 11 Strand, Torquay.
Hanbury, Cornelius, Plough Court, Lombard Street, E.C.
Hills, Walter, 338 Oxford Street, W.
Morson, Thomas, 124 Southampton Row, W.C.
Palmer, Robert, 35 Ovington Square, S.W.
Savory, Charles Harley, 143 New Bond Street, W.
Sharpe, George Young, 34 High Street, Notting Hill, W.
Urwick, William Walker, 60 St. George's Road, Pimlico, S.W.
Yarde, Giles, 60 Lambs Conduit Street, W.C.

Mr. Urwick is the only retiring member of Council who declines re-election.

The members of Council who retain their seats this year by lot are Messrs. Atherton, Baynes, Botty, Brown, Greenish, Radley and Savage. There will be fourteen vacant seats.

JABORANDI, A NEW MEDICINE.

A new medicine—with marvellous virtues, according to its sponsors—has been introduced and experimented with at the Hospital Beaujon, Paris. An account of the action and characters of the medicine appears in the *Repertoire de Pharmacie* of March 25, from which we condense the following particulars. Dr. S. Continho, of Pernambuco, who claims to have discovered the properties of the plant, induced Professor Gubler to make a trial of it, and the account given by that eminent physician corresponds exactly with the claims put forth by Dr. Continho.

The leaves and little twigs of the plant are broken up, and from four to six grammes infused in a cupful of warm water. The infusion may be taken warm or cold, and in about ten minutes after administration the patient breaks out into a violent perspiration, which continues for four or five hours, and which is so thorough as to necessitate several changes of linen. At the same time a most abundant flow of saliva is promoted, so abundant, says M. Gubler, that speech is rendered almost impossible. He asserts that he has known patients eject *more than a litre* in less than two hours. Occasionally the medicine has induced diarrhœa. Its action is more rapid and more thorough if taken warm, and if the patient is well covered up in bed, but its effects are none the less certain under quite contrary conditions.

MM. Continho and Gubler justly assume that there is a great future for a drug of such capabilities as this *jaborandi* seems to possess. According to Professor Baillon, the plant belongs to a species of the rue family, the *Pilocarpus pinnatus: jaborandi* it seems, is the Indian name for the plant. M. Continho slightly shakes our confidence in the miraculous power of his *prod* when he tells us that it is to be found in the interior of some of the northern provinces of Brazil, an expression which seems to bear a relationship to Dr. Bliss's famous condurango formula the herb which was only of value when procured "from the almost inaccessible slopes of the Andes." We shall hope for further enlightenment and evidence concerning this energetic diaphoretic.

DISINFECTION BY MEANS OF AROMATICS.

In reference to this subject, which Mr. Rimmel treated in a columus last November, that gentleman has received the following letter, and has forwarded it to us for publication:—

Geelong, Victoria, Australia,
January 28, 1874.

To M. Eugene Rimmel.

Dear Sir,—I have read with very great interest your letter in The Chemist and Druggist for November 15, 1873, on "Disinfection by means of Aromatics."

The subject is possessed of very great scientific interest, as is one to which I have paid much attention for some years past.

I have, I believe, succeeded in proving, on different occasions in papers read before the Medical Society of Victoria, that not only *all* essential oils, but also *all* expressed oils, possess the property of acting on the oxygen of the atmosphere, and converting it into peroxide of hydrogen, a substance which is now recognised as one of Nature's most powerful disinfectants—see "Ozone and Antozone," by Dr. Cornelius B. Fox, page 228—also *Medical Times and Gazette* for Sept. 20, 1873, "Old Friends with New Faces." In the form of spray, perfume absorb and chemically change the atmospheric oxygen very rapidly.

Some few months ago I read a paper "On the Spontaneous Formation of Peroxide of Hydrogen in Kerosene and other Allied Hydrocarbons, with Suggestions for their Use as Disinfectants." If I can procure a copy I will send it to you by next mail.

I have found that by brushing over thin note paper, such as I am writing on, with gasoline, it is at once converted into a disinfectant, and will retain that property for many months. Letters might be written on such paper in a small-pox hospital without, I am satisfied, the slightest danger of their conveying the infection.

I will tell you an easy and certain way of testing the presence of peroxide of hydrogen in essential oils or other substances. Peroxide of hydrogen *alone* is incapable of oxidising and turning blue the resin of guaiacum, but in the presence of blood particularly when it is diluted with water, it does so readily. You must use for this purpose a solution of the guaiacum resin in alcohol—not the tincture of the British Pharmacopœia which contains ammonia, and would spoil the experiment. You might get a little sheep's blood, and dilute it with water. Put

or two on a piece of white blotting paper, then pour over le of your old Eau de Cologne or lavender water, and, a few drops of tincture of guaiacum, when, if peroxide rogen be present, a beautiful blue reaction will be the This is an infallible test for peroxide of hydrogen. ing at your leisure to have the pleasure of hearing from have the honour to be, dear Sir,

Yours faithfully,
JOHN DAY, M.D.

PHARMACY IN SWEDEN.

heir brethren in Germany, the pharmacists of Sweden ng felt the inconveniences attaching to the system of ment concessions of pharmacies, and for many years past r at least a large section of them, have sighed for a bundant freedom of trade. Unlike the apothekers of y, however, the Swedish chemists have gone straight to ject, and, disregarding the difficulties of the way, have a scheme which will ultimately result in the open prac- pharmacy, such as it now exists in England and France, only by examinations. Their proposal was accepted Parliament, and received royal sanction last September. ould seem that the present holders of the concessions e that they cannot hope to maintain the exclusiveness of rivileges against the demand for freer trade from the ts and the public. They have, therefore, agreed, that concessions are granted, their value shall be estimated mmission, and the incumbent shall pay four per cent. of m annually towards a compensation fund. The same sion will value the present concessions, and the fund as we have described, will be devoted to the gradual e of the now existent privileges. As these are bought will be conceded again on the same terms as the new cies. The new plan is to come into operation in 1875, scheme as it is laid out is to complete itself in 1920. t optional with the apotheke proprietors to accept this or not. If they decline they retain their privileges, but emselves out from any share in the compensation fund, 1920 will find themselves in no better position than the the proprietors. There are 120 apothekers in Sweden, these 70 have already signified their intention of accept- proposal. Most likely the others will follow before Some of the German pharmacists are desirous of intro- somewhat corresponding system there, but it would be hore serious task to carry it out in Germany than in The last council of the German Apotheker-Verein es- the value of the existing privileges at fifty million

SOUTH LONDON SCHOOL OF PHARMACY AND THE "PHARMACEUTICAL JOURNAL."

eek two letters were inserted in the *Pharmaceutical* signed by students who had passed the March examina- ith honours," referring to an advertisement which had in that journal, declaring that all the honours in the mination had been carried off by students of the South School. The writers of these letters announced that never been connected with that establishment, and one with less delicacy than energy, attached to his letter in nguage the conclusion which it was evidently desired readers should draw.

ave little to do with these students, though in passing remark that since they have passed "with honours" st have had sufficient chemical education to have learned not to accept as a conclusion the first idea which meets them on the surface of an investigation. It is a pity they could not apply this valuable lesson to the occurrences of every-day life. But passing from them to the editor of the journal who was responsible for the publication of the letters, we may surely express our surprise at the indecent haste manifested to insert statements so damaging to the reputation of the gentlemen who conduct the South London School of Pharmacy. Whatever may be said of those gentlemen, they have certainly proved themselves to be good men of business, and from that characteristic alone it might have been assumed that they would not deliberately do such a stupid thing as to publish a statement directly opposed to patent facts. A little enquiry would have revealed the fact, which might have been suspected, that the error lay entirely with Messrs. Churchill in re-inserting a countermanded advertisement. We have before us the correspondence between Mr. Baxter, the secretary of the South London School, Messrs. Churchill and Mr. Bremridge, which clearly proves this, and proves, too, that Mr. Baxter had directed attention to the error before the letters appeared. We hold no brief for the South London School of Pharmacy, but it is about time to protest against the dangerous theory which seems to be held at 17 Bloomsbury Square, that not only all pharmaceutical wisdom, but also all pharmaceutical morality resides on those premises.

THE CULTIVATION OF MADDER IN FRANCE.

CHEMISTS have a long time foreseen that the successful production of alizarine from anthracene must, before long, close up the cultivation of madder, which has been by no means one of the most trifling sources of wealth for France. The loss of the madder fields, too, will not only affect the material prosperity of France, but will certainly remove from its eastern and southern departments one of their prettiest and gayest products. M. Eugell Dollfus, of Dornach (Alsace), has submitted to the Central Society of Agriculture certain statistics which indicate how the foreign demand for French madder is diminishing. According to him, in the first eight months of 1873, 1,696,685 kilogrammes were exported. In the corresponding period of 1872, 2,523,534 kilogrammes were bought by foreign customers. The quantity shipped to England in those periods was, in 1872, 821,974 kilogrammes; in 1873, 693,648 kilogrammes. This seems to show that English dyers have not adopted the artificial dye so readily as other countries. The writer remarks that for reds and rose tints the madder flowers are still preferred to the artificial alizarine; but for violets the latter produces much more economically shades fully as rich as those obtained from the plant.

CASE OF EMOTIONAL INSANITY.—A western paper has this item:—It is reported that a Green Bay, Wis., dentist became emotionally insane while repairing a front tooth for a pretty woman, and kissed her. She told her husband, and he went round the next day and borrowed $300 of the dentist—on long time.

"DIED OF GREED" would be a very proper epitaph for the Civil Service Supply Association, which, by deciding to divide the profits of the business amongst the members, instead of applying them to the reduction of prices, has perverted itself from a co-operative to a joint-stock concern, and lost the favour of its best men, as well as the approbation of the public. It only remains for Mr. Disraeli's Government to suppress it—which they will very speedily do.—*Figaro.*

HUNTER v. FREELAND.

We have been asked to publish the following statement. It reached us one post too late for our last issue:—

Referring to the report of this case which appeared in the *Pharmaceutical Journal* of dates January 10 and 24 last, a number of the trade are of opinion that Mr. Freeland should be reimbursed for the heavy expenses, amounting to 267*l.*, incurred by him in defending himself in the law courts.

They consider the action to have been of a most vexatious character, and if druggists throughout the country were compelled to act according to the reasons given by the jury for their verdict, the consequence would be the shutting up of a great number of the druggists' shops in many of the smaller towns in Scotland. The statement by the foreman of the jury was to the following effect:—

"The jury unanimously found for the pursuer, and assessed the damages at 12*l.* The foreman of the jury stated that they had not been guided in their decision so much by the injury sustained as by the principle that more care should be taken in dispensing chemicals, and they intended it as a lesson to chemists to provide properly qualified assistants to take charge during their absence."

It will be seen from the journal of date January 24 that the young man in Mr. Freeland's employment has passed his preliminary examination very creditably.

The following gentlemen have kindly agreed to receive subscriptions, and Mr. Kinninmont to act as secretary to the fund:—Mr. McDonald, of the Glasgow Apothecaries' Company, 34 Virginia Street, Glasgow; Mr. Greig, Glassford Street Glasgow; Mr. John Mackay, 119 George Street, Edinburgh.

Mr. ALEX. KINNINMONT,
Hon. Secretary.
69 South Portland Street, Glasgow.

The following subscriptions have been already intimated:—

	£	s.	d.
Glasgow Apothecaries' Company	5	5	0
Messrs. Duncan, Flockhart, & Co., Edinburgh ..	3	3	0
Mr. John Mackay, Edinburgh	2	2	0
Mr. Wm. Greig, Glasgow	2	2	0
Mr. Adam McGregor, Ayr	1	1	0
Mr. Alex. Kinninmont, Glasgow	1	1	0
Proprietors of THE CHEMIST AND DRUGGIST ..	1	1	0
Mr. Geo. Smith, Glasgow	0	10	6
Mr. R. C. Rait, Partick	0	10	6

The particulars of the case are these:—

On November 26, 1872, a man of the name of Dawson and his wife went into Mr. Freelaud's shop in Bathgate, whilst he was at tea, and asked for 3 ozs. of quicksilver and 1 oz. of nitric acid, to be put into a bottle. A lad, Paris, aged 17, an apprentice in his 3rd year, put the chemicals into a 2-oz. bottle, and placed the bottle on the counter with a cork in it; but observing that the contents commenced to effervesce, he proceeded to ease the cork, when the mixture squirted up into his face, and at the same time a portion of the spray flew across the counter, and fell on Dawson and his wife, and on a woman named Hunter, who was in the shop making a purchase, and who was the female pursuer in the action afterwards brought. One drop fell on the latter person's head, and another on the side of her nose. All the parties immediately washed the acid off with water, a plentiful supply of which was in the back shop. The boy received nearly the whole in his face, and Dawson and his wife received a great deal more than the female pursuer (who, standing farthest off, received very little). Dawson only made a claim on Mr. Freeland for assistance to get a new coat, the one he had on being a little spotted with the acid, and was paid 22*s.*, with which he was perfectly satisfied. The lad Paris was back at his work in the course of three days, and has suffered no permanent injury; and there are no traces now of his ever having received any of the acid on his person.

The woman Hunter also made a claim for compensation which was eventually pressed in the form of an action in the Court of Session, which came on for trial before Lord Mure and a jury on November 18 last, and occupied two whole days. The damages were laid at 350*l.* It was alleged on behalf of the pursuer that the lad Paris was totally ignorant of the nature of chemicals; that he placed considerable quantities of oxide of silver and nitric acid in a bottle, which he stoppered, thereby causing an explosion, whereby the female pursuer was seriously burned on the face, arms, and head; that she suffered intolerable and excruciating pain in the head for several days and nights, and still continued to suffer great pain from the effects of the explosion. Mrs. Hunter deposed that a great deal of her hair had come off, that her health had much changed, and that she was no longer able to work as she did before the accident. Dr. Kirk deposed that he was called in and found Mrs. Hunter pillowed in bed, suffering much pain, with a good number of copper-coloured spots on the side of her head. In his opinion the symptoms were caused by a burning substance. She had never regained her former robustness.

For the defence, Dr. Longmuir deposed that he visited pursuer at defendant's request, when she complained of a burn on the head and in the right corner of her left eye. The only burn he observed was on the side of the nose; and he considered she got off with almost no injury. Nitric acid produced a yellow, not a copper-coloured stain: he had experimented with nitric acid and quicksilver, which produced the same yellow colour, but was not so active as pure nitric acid. Dr. Littlejohn deposed that nitric acid, dropped on the skin and washed off directly, would not cause injury. Would ascribe the symptoms to which the pursuer was said to have laboured to a blow, a fall or a cold. Dr. Anderson said that he saw pursuer on March 1. On examination he detected a mark below the left eye. He found no trace of any marks on the head, and there was no appearance of loss of hair. She said that her health was not good, that she was well enough, and that she felt nothing permanently wrong with her. Dr. Watson deposed that spots such as described would not cause much injury. He doubted whether the copper-coloured spots had anything to do with the accident at all. If destruction of tissue had taken place, the mark would have been permanent. No effect would be produced on the system.

After some other evidence the judge summed up, and the jury having retired, returned in 15 minutes with a unanimous verdict for the pursuer, laying the damages at 12*l.*, with expenses. The foreman of the jury stated that they had not been guided in their decision so much by the injury sustained as by the principle that more care should be taken in dispensing chemicals, and they intended it as a lesson to chemists to provide properly qualified assistants to take charge during their absence.

The heavy expenses in which Mr. Freeland was involved by this trial were consequent on the wantonness of the pursuer in taking the case into the Supreme Court instead of trying it in the County Court. Mr. Freelaud made several attempts to compromise the claim without litigation, but the prosecutrix refused all overtures. The verdict of the jury and their comments indicated their view of the amount of injury sustained by the prosecutrix. That Mr. Freeland was thus made a scapegoat for the sins of the whole trade, and especially of that section of the trade which neglects "to provide properly qualified assistants," is a circumstance which, as it seems to us, justifies our Scotch friends in asking their *confrères* to join them in a manifestation of a degree of sympathy with the defendant in a case which might have happened to any one who takes an apprentice,—and somebody must take apprentices. It is to be hoped that firms who are so happily situated as to be able to carry out fully the jury's desire, no less than their less fortunate brethren, will look at the accident and its results as one which it is hard should injure one man only, and will cheerfully subscribe something in the hat now circulating.

We are pleased to be able to add that both Drs. Littlejohn and Watson declined the fee that was offered them for their evidence on the ground that the sufferer was a druggist and in their opinion unjustly treated.

Provincial Reports.

DW CHEMISTS' AND DRUGGISTS' ASSOCIATION.

Session 1873–74.

st general meeting of the Association for the present was held on Wednesday, April 1, at 9 P.M., Mr. John President, in the Chair.

minutes of previous meeting having been read, the n thought that it would be better to defer the discus- the same till further on in the evening. He then called Fergus to deliver his lecture on "Pure Air and Water." ure, which was experimentally illustrated, proved to be resting, and was listened to with marked attention. At the lecturer was accorded a most hearty vote of thanks.

McMillan, in name of Messrs. Calvert, Bradford, then d to the Association a number of chemical specimens, Secretary was instructed to forward the best thanks of ciation to Messrs. Calvert for the same.

embers of the library committee who were present then in the money collected by them, which amounted to 6*d.*; but there still remained three subscription sheets en into account. It was thought that the total sum would reach about 40*l.*

M. Fairlie exhibited the new preparations of the Phar- a.

LIVERPOOL CHEMISTS' ASSOCIATION.

The Additions to the Pharmacopœia.

(from our special correspondent.)

April 11, 1874.

venth General Meeting was held at the Royal Institute, 12, 1874, the President (Dr. Symes) in the chair. A s read by Mr. Charles Sharp, on "A Half-Century of Inventions relating to the Preservation of Food."

traordinary General Meeting was held February 26, the Royal Institution, in compliance with a requisition y more than twelve members, at the instigation of Dr. who intimated that he intended to bring forward the g motions:—1st. The amendment of Law 5, and the ity of limiting re-election of Council members. 2nd. e minutes of Council meetings be read at General 3rd. The advisability of reporting discussions ver- 4th. The alteration of election of Presidents in so far Presidents shall be elected at the last General meeting , and that the Annual meeting shall be the last of 5th. Enforcement of Law 4 (last clause). 6th. Dis- egarding conduct of Council in the matters committed care by Association at prior part of session.

Hallawell intimated that he intended to bring forward wing motions:—1st. That the election of President cede his assumption of office at least three months. t only one-half of the retiring members of Council ligible for re-election, the eligibility for re-election to nined by lot or otherwise. 3rd. That more efficient ould be provided for the report of the proceedings of al meetings, especially the remarks made and subjects f as miscellaneous communications.

air was taken by the President (Dr. Symes), who briefly l the objects of the meeting.

on. Secretary then read letters of apology from Messrs. Williams, Herdfield, A. Norman Tate, Fearnal, and the latter three having signed the requisition protesting notions No. 2, 3, 4, 5, and 6, only approving of motion Including the President, there were only six of the nists present. 27 members were present. The result meeting was that none of Dr. Cooke's motions were carried, and the discussion, as far as he was concerned, was by a large majority adjourned *sine die*.

Mr. Hallawell declined to bring forward his motions, as it was so late; but preferred to reserve them until the annual meeting.

A vote of thanks to the chairman terminated the proceedings.

The twelfth General meeting was held at the Royal Institution on Thursday evening, the 9th inst., the President (Dr. Symes) in the chair. The following donations were announced:—To the Library—2 copies of "The additions to the British Pharmacopœia, 1874," from Messrs. Evans, Sons, & Company; "Proceedings of the Smithsonian Institute," from the Society, &c. To the Museum—specimens of the 34 additions to the Pharmacopœia, from Messrs. Evans, Sons, & Co.

Mr. John Horn, and Mr. P. P. Rpsorrty (of Bombay) were elected members.

Mr. Abraham intimated to the meeting the sad news of the sudden death of Mr. Deane, of Clapham, which intelligence met with the universal regret of those present.

Mr. Alfred H. Mason, F.C.S., introduced the discussion for the evening—"Some Notes on the 1874 Additions to the British Pharmacopœia of 1867."

Most of the chemicals and drugs in the addenda have already been in extensive use some time, though now for the first time they receive the sanction of the Medical Council.

Of these 34 additions, 6 are chemical products, or are inserted without direct formula for their production, therefore not intended to be manufactured by every pharmacist (although Mr. Umney, in the admirable paper he read at the last evening meeting of the Pharmaceutical Society, gives much valuable information and assistance).

Sapo Animalis is an addition which will be much appreciated, and a recognised formulary for the manufacturer will be advantageous. There are 24 pharmaceutical preparations, with complete instructions for preparation—areca-aurantii, fruct, and gutta percha complete the list.

The additions were treated seriatim, and the results of experiments given.

The President said: Before considering in detail the merits of the "Additions to the Pharmacopœia," it will be well to consider the objects which it is desired to accomplish. New editions of the Pharmacopœia occur only once in about 10 years, and during the interim new remedies are introduced of greater or less value. Some of these have the merit of at least being worthy an extended trial, and this cannot be satisfactorily done unless some uniform character and strength be decided on, so that medical men in different parts of the country may rely on getting the same drug dispensed.

We were pleased, then, to find that the Medical Council purposed publishing a kind of secondary list or appendix which should contain the new medicines in *general* use in Great Britain. We had experienced the difficulties which had arison from drugs under the same name but possessing different medicinal value finding their way into prescriptions, and we anxiously looked forward to the disappearance of all these, at least for the present, by the publication of the appendix; at last we have it, and disappointment fills the place of our expectations. For my own part I look on it as a complete failure. In vain we seek for many remedies with which from daily use we have become familiar, and we find in their place such things as acetic ether, areca nut, &c.—the former we know well as an application, but in this country it is rarely prescribed internally. Areca, too, we have often sold for dogs; but how many of us have dispensed it for the human subject? Perhaps some of our missing friends will find a place in future Pharmacopœias when areca has again been handed back to its canine patrons.

Many of the formulæ, too, have been unnecessarily varied from those usually adopted, and in each case the change appears to be for the worse. Why is *Pulvis Glycyrrhizæ Co.* introduced? Simply because the experience of medical men with the Prussian powder shows it to be a desirable addition. Very good; why not adopt the Prussian formula, instead of one of a different strength and character. Already medical men are expressing their dissatisfaction at this, and I have more than once seen the word *Prussian* underlined when this powder has been prescribed. Another instance of an absurd formula is that for Tinct. Aurantii Recentis; indeed, instances may be multiplied in that very small book, and yet it is no secondary list, requiring certain standards of strength and character, but allowing some variations in process. It is stamped with the authority of the Pharmacopœia, and its errors have become law.

Messrs. Davies, Shaw, T. F. Abraham, and others took part in the discussion.

Mr. Abraham said: Time had passed so quickly that he had hardly opportunity to say so much as he could wish; but at the next meeting he wished to add something. A paper on "Commercial Pepsine and its relation to the Pepsine of the Pharmacopœia," with microscopical illustrations, announced to be read by Mr. Abraham, was postponed to next meeting. A vote of thanks to Mr. Mason closed the proceedings.

HULL CHEMISTS' ASSOCIATION.

The following is the Report of the Chemistry and Materia Medica Classes held during the past Session, under the auspices of the above Association:—

To the President and Committee of the Hull Chemists' Association.

Gentlemen,—I have pleasure in furnishing you with report of the Chemistry and Materia Medica Class for Session 1873-4. I have delivered 24 lectures as follow: Chemistry, 16; Materia Medica, 7; Pharmacy, 1; at which the attendance and attention of the students has been good. The lectures on the first subject named have been illustrated by experiments as far as our limited resources allow, and the more experience I have in this department the more I learn the necessity for increased means of practical study.

I regret to inform you of a decrease in the number of students, compared with last year. Though there are many young men who have not passed the examinations of the Pharmaceutical Society, only nine have taken advantage of this means of instruction. The cause I attribute principally to the number of apprentices who have not yet passed the preliminary examination.

The examinations for prizes were held on the 11th and 18th March, with following result:—

Senior Chemistry	... ...	Mr. F. W. Lambert.
Junior ,,	... ...	,, Septimus Walpole.
Senior Materia Medica	... ...	,, F. W. Lambert.
Junior ,, ,,	... ...	Not awarded.

In the latter the competitors failed to obtain sufficient marks for the prize. I am pleased with Mr. Padley's work, who competed for Junior Chemistry prize, and beg to recommend him as deserving some reward. I append the Questions; and, in conclusion, trust that success will crown our efforts.

I am, Gentlemen,
Yours faithfully,
March 26, 1874. H. J. Parson.

Senior Chemistry.

1. State the principles of the atomic theory.
2. Describe an experiment to show the difference between a mechanical mixture and a chemical compound.
3. How much oxygen by weight can be obtained by the decomposition of 60 grains of potassium chlorate?
4. Describe the analysis of an aqueous liquid, containing salts of potassium, sodium, and ammonium.
5. How are the carbonates of sodium, magnesium, lead, and zinc prepared?
6. Write what you know respecting the alums.
7. How would you distinguish tartaric and citric acids?
8. Give the tests for copper, mercury, and silver.
9. Give process and diagram describing decomposition in the preparation of permanganate of potassium, and explain in what manner it acts as a disinfectant.

Junior Chemistry.

1. State the principles of the atomic theory.
2. Distinguish between a chemical element and a compound.
3. Give the composition by weight of the five oxides of nitrogen.
4. How may oxygen be prepared? Enumerate its properties.
5. Define deliquescence, efflorescence, decantation, and lixiviation.
6. What are the sources of potassium and sodium salts?
7. Give the composition of the atmosphere by volume?
8. How is chlorinated lime prepared?
9. Give process and diagram describing decomposition in the preparation of tartarated soda.

Senior Materia Medica.

1. Give the names of specimens placed before you, and [illegible] to what part of the plant they belong.
2. What are the botanical and geographical sources of [illegible] black, and green hellebore?
3. What is saffron? Name the substances used to adulterate it, and the means of detecting such adulterations.
4. What are the botanical and geographical sources of [illegible] mony? Name the adulterations of the same, and of the [illegible] and how they may be detected.
5. Give botanical names and natural orders of the following Woody Nightshade, Hemlock, Ergot, Sumbul, Iceland Moss.
6. What are the botanical and geographical sources of following drugs? Name the parts of the plant used in medicine, and state how those that are not natural are prepared.

Opium.	Rhubarb.
Lactucarium.	Camphor.

Junior Materia Medica.

1. Give the names of specimens placed before you, and [illegible] to what part of the plant they belong.
2. Write what you know respecting cinnamon and [illegible] barks, and how they may be distinguished.
3. What are cloves? Name the botanical and geogra[illegible] sources.
4. What are the botanical and geographical sources of [illegible] phor? Name the B.P. preparations into which it enters.
5. Give the natural orders and botanical names of W[illegible] Nightshade, Hemlock, Ergot, Sumbul, Iceland Moss.
6. What are the botanical and geographical sources of following drugs? Name the parts of the plant used in medic[illegible] and state how those that are not natural are prepared.

Opium.	Rhubarb.
Lactucarium.	Ammoniacum.

THE SOCIETY OF CHEMISTS AND DRUGGIS[illegible] OF IRELAND.

THE severe opposition to the incorporation of the ch[illegible] and druggists of Ireland into a qualified and recog[illegible] body which has been offered by a section of the Irish ap[illegible] caries seems to have checked the courage of some of the m[illegible] of the society, and at the March meeting there was a dispo[illegible] evinced to adjourn *sine die*. Mr. Holmes, however, opposed course, and suggested as a diversion from the more imm[illegible] object of the society the arrangement of a course of lectu[illegible] scientific subjects. This proposal was adopted, and before [illegible] the following programme was drawn up:—March 30, "[illegible] Secrets of Modern Pharmacy," Prof. Chas. R. C. Tich[illegible] Ph.D., &c.; April 13, "Terrestrial Distribution of H[illegible] George Porte, Esq., M.R.I.A., &c.; April 27, "Some Phen[illegible] of Light, and their relation to Practical Chemistry," H[illegible] Draper, Esq., F.C.S.; May 11 "Adaptations in Plants," P[illegible] Robert M'Nab, M.D.; May 18, "The Microscope," Joseph Woodworth, Esq.; May 25, "Crystallisation and Crysta[illegible] forms of Pharmaceutical Products," Prof. J. Emerson Reyn[illegible] L.K. & Q.C.P.; June 8, "Adulteration of Food and D[illegible] Prof. Charles Cameron, L.K. & Q.C.P., City Analyst. Th[illegible] 6*d.* each; or 2*s.* 6*d.* for the course. Members adm[illegible] free.

The first lecture by Professor Tichborne, whose hearty [illegible] port of the Society from its commencement has consid[illegible] strengthened its position, was a decided success. The cha[illegible] taken by Mr. John Brooks. The lecturer explained a di[illegible] subject very lucidly, and elicited frequent applause. The t[illegible] treated of were the decomposition of water, fermentation, dissociation in connection with fluids, to the investigation

had himself devoted a great deal of attention. The as illustrated by various chemical and electrical ex- s of an instructive and interesting character, which the subject most intelligible to the audience. At its n Mr. Erson, J.P., moved a vote of thanks to the a and Mr. Tichborne. Mr. Hayes, Hon. Secretary, the motion, and took occasion to express a hope that est of the course the attendance of ladies might be han he observed on that occasion. He was convinced ies would derive much profitable instruction from the which they could advantageously apply to domestic and other domestic purposes. After a few words from rman the vote of thanks was passed by acclamation. r Tichborne, in responding, referred to the remarks Mr. Hayes on the subject of the attendance of ladies, gested that the profession of pharmacy was especially to ladies, on account of their superior neatness of ation as compared with men. Probably it would be ars before such a result would be attained by ladies in ntry, although on the Continent it was at present by no rare thing to find them engaged in the practice of phar- At any rate, this profession, he thought, was much more for them than was surgery and anatomy.

Medical Gleanings.

ssion on Cancer has recently taken place at the Patho- Society, in which, at least, one remarkable fact was placed ntly before the medical world. This was in reference to fluency of its hereditariness. The most keenly contested the discussion was in reference to the question whether a constitutional or a local disease. The latter opinion ntained by Mr. Campbell De Morgan, who opened the on, and was supported by Sir William Gull, Mr. Simon, tchinson, and other authorities. Sir James Paget, single-handed, combated this view, but his arguments forcible that the impression is that at the finish victory to his side. One of the main arguments with which orted his views was the frequent hereditary occurrence iscase. Formerly, he said, he had believed that the cases in which hereditary tendency could be traced was ne in six; with a more extended experience, he said, he rtainly now "without difficulty count not less than one of all patients in whose families the occurrence of cancer known." This statement somewhat startled his hearers, as generally admitted that the hereditary occurrence of was much more frequent than was generally supposed. fact as this is worth elimination. It points to a course tigation as to the predisposing causes of this terrible n, which may one day enable medical experts to offer actics rather than remedies, and thus ultimately over- e disease entirely.

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rrespondent of the *Medical Times* writes that in the es Islands, a notion prevails that headache, neuralgia, and other cerebral affections proceed from a crack in the pressure of the skull on the brain. The remedy is to h the scalp with a cross or T incision, then scrape the n carefully and gently with a piece of glass until a hole into the skull down to the dura mater, about the size wn piece. Sometimes this scraping operation will be the pia mater by an unskilful surgeon, or from the im- of the friends, and death is the consequence. In the hands about half of those who undergo the operation die ; yet this barbarous custom, from superstition and has been so prevalent that very few of the male adults hout this hole in the cranium, or "have a shingle loose," an Australian phrase. It is said that sometimes an attempt is made to cover the membranes of the cranium so exposed by placing a piece of cocoa-nut shell under the scalp. For this purpose they select a very hard and durable piece of shell, from which they scrape the softer parts and grind quite smooth, and put this as a plate between the scalp and skull. Formerly the trephine was simply a shark's tooth; now, a piece of broken glass is found more suitable, or less objectionable (if we may even so qualify the act). The part of the cranium generally selected is that where the coronal and sagital sutures unite, or a little above it, upon the supposition that there the fracture exists. This bone-scraping remedy is likewise employed in cases of rheumatism in old people. The cuticle is incised longitudinally, and the centre of the ulna or tibia laid bare; then the surface of the bone is scraped with glass until a large portion of the external lamina is removed.

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A most interesting medical competition has lately been decided by the Academy of Sciences of Paris. The Marquis d'Ourche left 25,000 francs to be distributed for essays which should indicate means of assurance of death, so as to avoid any possibility of premature burial. Twenty thousand francs were to be awarded for a method which might be put in practice by the most uneducated villagers; and 5,000 francs for a scientific method of recognising with certainty the signs of death. The distinction strikes us as somewhat analogous to the philosopher's two holes, one for the cat and one for the kitten; but this does not seem to have prevented a handsome competition. Over a hundred essays have been sent in, and prizes have been distributed according to the judgment of the Academy. One of the most remarkable of the essays, to which a reward of 2,000 francs has been granted, is by M. Molland. The writer, who is attached to the office for verification of deaths in the city of Paris, has made his observations on more than fifteen thousand subjects, which he inspected several times, so as to verify the succession of the phenomena of the extinction of life. His attention was particularly directed to the violet-coloured spots which in the dead body showed themselves on the dependent part. He traced them to their origin and through their evolution, and he has arrived at the conclusion that these cadaveric livid appearances are a constant characteristic of death, since they have never failed to be present in his fifteen thousand observations. This sign is of so much the more practical value that it generally appears shortly after death.

Other certain signs of death are reported to be the application of cupping glasses to the pit of the stomach, which, though they will produce blood soon after the heart has ceased to beat, will not do so later on. The burning of the pulp of the finger in the flame of a candle will produce blisters which will be filled with serous matter if life still continue, but will only contain vapour if life be extinct. Various alterations in the eye are also proved to be certain signs of death. For example, neither belladonna nor Calabar bean have any effect on the iris a few hours after death. A rapid discolouration of the back of the eye, too, takes place soon after death.

The *Medical Record*, which gives a summary of the competition, is sceptical as to the cases of premature inhumation on record. Our contemporary considers that if fatal mistakes have really taken place, as, for instance, at the time of the great plagues, they may be imputed to ignorance and to the excessive haste of the people about the deceased. On what pseudo-scientific data does the fear of being buried alive rest? On the belief shared by some medical men that diseases are frequently met with, such as catalepsy and lethargy, in which death is perfectly simulated. But the facts of catalepsy (not to speak of some slight cataleptic phenomena) are so rare that even the existence of that affection may be legitimately doubted, and

à fortiori, the same remark may be applied to cases of lethargy. Clinical medicine often shows us certain pathological sleeps which are more or less profound, and which to inexperienced eyes may appear akin to death. But medical science ought to proclaim, so loudly that the most deaf can hear, that there is never any abolition of circulation or respiration in these cataleptic and lethargic conditions: the pulsation of the heart, the pulse, the respiratory movement are always evident; that is to say, the most positive signs of life remain manifest. Lethargy, such as it is understood and dreaded by the public, such as it has been described by ancient authors, has no existence.

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The medical journals have lately harmonised most cordially in urging higher fees for consulting physicians, and Mr. Spencer Wells even went so far as to bring the subject under the notice of the Medico-Chirurgical Society. It may be difficult to see the connection, but perhaps we may be permitted to print the verbatim report of a lecture to which we listened recently, "under the broad canopy of heaven," as Dr. Kenealy would say, on Pentonville Hill. The fragment we heard ran thus:—"The lozenges which I have here the honour of introducing to your notice, ladies and gentlemen, and which you see before you on this tray, I offer to you only as a cure for coughs. I do not profess they will cure everything: they will not. They will not cure tooth-ache, head-ache, scarlet fever, diabetes, diarrhœa, or cholera; neither will they cure gout, sciatica, dropsy, or rheumatics; but they will cure coughs, asthma, and incipient consumption. I have sold many hundredweights of them both in London and the country, and I never yet knew of an individual, male or female, man, woman, or child, who took any of my lozenges without deriving benefit from them. As I have already said, if any lady or gentleman standing around me this evening should purchase a box of my lozenges, and find them to be of no avail in cases of cough, they can bring back to me the smallest portion of one of these lozenges wherever I may be standing, whether it be the Whitechapel Road, Bow, Bethual Green, Shepherd's Bush, the Seven Dials, or Pentonville Hill, and I will undertake not only to give back the purchase money, but I will in addition pay that person one shilling for his trouble, and he shall be at liberty to kick my stall over, or adopt such other means as shall seem good to him to expose the falsity of my pretensions. Furthermore, I would entreat any lady or gentleman standing around me, who may be suffering from a cough, but whose means may not permit them to purchase a box of the lozenges, although the price is only one penny, not to go away without some of them, for I will willingly present such persons with a box of them, and all I will ask in return is that if they find benefit from them they will kindly recommend my lozenges among those of their friends who may also suffer from coughs. I make no secret of the composition of these lozenges; the only secret which I do not disclose is the proportion of the ingredients. I take first of all a solution of honey and loaf sugar dissolved in cold water; to this I add a mixture of chlorodyne, the compound tincture of camphor of the British Pharmacopœia, the essential oil of aniseed, and the tincture of lobelia combined with spirits of wine and ammonia. By mixing these substances a white deposit is formed, which, after the lapse of two hours or two hours and a half, I separate by the aid of the extract of red rhatany root, which gives the lozenges the peculiar pinky colour which you observe they possess. In order to give you an idea of the process, I have here a solution of honey and loaf sugar in cold water; you will perhaps think that this is not a solution of honey and loaf sugar in cold water, because, you will say, it ought not to be so clear as it is; but I may tell you that this has gone through the process of filtration, which gives it the clear appearance that you now observe. I pour about a tablespoonful into this wine glass, and add to it the active principles contained in this bottle, which as I have before explained, consist of chlorodyne, the compound tincture of camphor of the British Pharmacopœia, the essential oil of aniseed, and the tincture of lobelia, combined with spirits of wine and ammonia. You will observe a white, milky cloud which gradually falls to the bottom of the liquid, and which at the end of two hours or two hours and a half, can be separated and made into those lozenges by the aid of the extract of red rhatany, which gives to the lozenges the peculiar pinky colour which you observe them to possess."

The experiment was watched with breathless interest by a half-dozen dirty, but eager little faces which filled up the first circle, and with not much less curiosity by the big lads with short clay pipes in their mouths who were idling away a few minutes in that little group. The complete cessation of smoking during its progress was a testimony to the interest aroused, no less than was the murmur of approbation which greeted the complete verification of the result anticipated by the orator, and two boxes of lozenges were sold as a consequence of the address.

Two-pence sterling, and hardly more than 25 per cent. on that net profit. It rubbed out a little misanthropy to hear the gentleman's courteous "thank you" to each of his humble customers; but somehow it recalled rather vividly the more or less graciously accepted guinea with which a short time previously we had paid for ten minutes' consultation with the eminent West End physician, who at the same time advised us by no means to risk our life by having his prescription prepared at other than one establishment. As the *Lancet* would say, "this is a case for the police." Doubtless; but which?

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In a paper read before the Anthropological Institute last week the Rev. Dunbar Heath argued that mind was not the "concrete essence of the brain," but the result of the "existence of a material film surrounding the outside surface of the brain." To this film he proposes to give the name "psychoplasm." Professor Burk, who presided, and other scientific men, objected, on the very substantial ground that no such film exists: on which the reverend gentleman collapsed.

Pharmacy.

EMULSION OF RAW MEAT.

We quote from the *Repertoire de Pharmacie* a formula for the above, which was given by its inventor (M. Yvon) at a meeting of the Société d'Emulation pour les Science Pharmaceutique. The object was to provide an agreeable means of administering raw meat, a remedy much in fashion with some of the Continental physicians. M. Yvon takes

Raw meat	250	grammes.
Sweet almonds	75	,,
Bitter ,, ...	5	,,
White sugar	80	,,

The almonds are blanched and the whole beaten up in a marble mortar until a rose-coloured homogeneous paste is obtained. This is said to be of very pleasant flavour and readily taken by sick persons. It may easily be made into an emulsion with water, which will not unmix for twenty-four hours: the emulsion can be made still more nourishing by the addition of the yolks of two eggs and by being made up with milk instead of with water.

BALSAM OF TOLU.

The most important Continental writers on Materia Medica are at variance in their statements of the composition of Balsam of Tolu. Guibourt, Scharling, Riche, Girardin, and Lithé and

y that it contains benzoic acid, in addition to cinnamic; ouberian (following Kopp) and Pelouze and Fremy at cinnamic acid alone is present. M. T. Carles* has shown, by a very simple experiment, that the latter t is the correct one. Having had occasion to digest hard and soft kinds of Balsam of Tolu separately, in r, he obtained from each on cooling traces of a crystal-. After two crystallisations from alcohol and from succeeded in verifying the identity and purity of the ucts by taking their equivalents by means of a titrated solution, according to the ordinary method. The great e in the atomic weights of the two acids (benzoic acid namic 148) permitted this to be done with ease. He e equivalent of the acid obtained from hard balsam to 5, and from soft balsam 148·4, leaving no doubt that acid of Bals. Tolu, whether hard or soft, is cinnamic ly.

THE PREPARATION OF KERMES.

searches on the preparation of kermes, and the action ine carbonates and the alkaline earths on sulphide of y, M. Terreil† has found that to produce kermes by the an alkaline carbonate on sulphide of antimony by the it is absolutely necessary that the carbonate should be sed during the process into carbonic gas and alkali, carbonate of sodium alone is thus decomposed. Potas- bonate cannot, then, be used with antimony sulphide to kermes in the wet way; indeed, so completely does the resist decomposition that a very minute quantity of salt present as impurity may be measured by the amount es which is produced. By the dry process, carbonate of m gives more kermes than carbonate of sodium does. te of lime has no action on antimony sulphide in the , neither have the hydrates of barium or strontium. lime, however, gives a liquor which deposits kermes on and ultimately the whole of the antimony taken up is down in this form by the absorption of carbonic gas.

ESTIMATION OF THE ALKALOIDS.

ER‡ makes use of the hydrargyro-iodide of potassium to ne the amount of all vegeto-alkalies, whether pure or d in pharmaceutical prèparations. This reagent, as is own, is a solution of mercuric chloride in excess of m iodide. For volumetric analysis, 13·546 grammes ormer salt, and 49·8 grammes of the latter, dissolved in of water, form a decinormal solution. Of this solution ic centimetre will precipitate

·6	gramme of aconitine.		·020	gramme of morphine.	
·4	,,	atropine.	·004	,,	chonicine.
·1	,,	narcotine.	·004	,,	nicotine.
·6	,,	strychnine.	·010	,,	quinine.
·3	,,	brucine.	·010	,,	cinchonine.
·6	,,	veratrine.	·010	,,	quinidine.

rcurial solution should be added to that containing the d. The precipitates are formed in either acid, neutral, tly alkaline solutions; and with the exception of alcohol tic acid the reaction is not hindered by the ordinary con- s of pharmaceutical preparations. This process will $\frac{1}{10000}$th part of the alkaloid, especially if the solution be ed to dialysis. It is of course applicable only to those here a single alkaloid is supposed to be present.

VEHICLES FOR COD-LIVER OIL.

ERABLE attention having been directed of late to the f means for disguising the taste of cod-liver oil, we are d to insert one or two devices which will perhaps be new to f our readers. M. Deschamps, of Avallou, suggests the ution of cod-liver oil for olive oil in making salad. M. rd speaks strongly in favour of adding small pieces of sar- the spoonful of oil, and says that this procedure is very ful with children. The patient is very gradually led up point of taking the oil in this way. At first he is plied e sardines alone, afterwards with the addition of the accom- g oil, and lastly the sardine oil gives place to cod-liver nother more recent method is to heat 400 parts of the oil in a closed vessel at 50° C. for fifteen minutes, with 20 parts of roasted and ground coffee and 10 parts of animal charcoal; after being left in contact for two or three days, with occasional agitation, the oil is filtered away and is said to taste of coffee only. The following formula for a ferruginous syrup of cod-liver oil is much esteemed in Germany:

Powdered gum arabic	68 parts.
Distilled water	60 ,,
Syrup of lactophosphate of iron.. ..	180 ,,
Bleached cod-liver oil	250 ,,
Essence of bitter almonds	6 ,,

A formula much used by M. Delpech contains the oil in a partly saponified condition:

Bleached cod-liver oil	100
Powdered gum arabic	50
Cherry laurel water	20
Orange-flower water	20
Simple syrup	200
Calcined magnesia..	4

M. Deschamps also recommends a cod-liver oil soap, to be taken in 3 grain pills, but it is necessary to take 40 to 60 a day!

ESTIMATION OF TANNIN.

M. Dumas has invented an apparatus by which the quantity of tannin in any given substance can be estimated with great ease and rapidity. It consists of a glass tube containing an alkaline solution and atmospheric air. The substance to be examined is introduced into the tube: the two ends of the latter are closed by means of stop-cocks, and the tube is well shaken. The tannin combines with the oxygen of the air to form a salt with the alkali, and a vacuum takes place in the tube. One of the stop-cocks is then to be opened in some liquid, and in noting the quantity of the latter which is drawn into the tube we can calculate the amount of oxygen which has been absorbed, and, consequently, the quantity of tannin which the substance examined contained. In this way it will be found that the pods of the acacia contain 40 per cent. of tannin, chesnuts 60 per cent., oak bark 76 per cent., and the yellow catechu 77.

Poisonings.

At the Galway assizes a grocer's boy was charged with manslaughter. The prisoner, who had been only two days in his situation, was entrusted to serve a girl with a pennyworth of jalap; the drawers were not labelled; he gave her a brown powder, which he believed to be jalap, but which afterwards proved to be hellebore. The girl took the powder, and died a few hours after. The jury were unable to agree, and were discharged. The lad has to stand his trial again at the next assizes. The *Medical Press* pertinently inquires, "Why it is that the shopkeeper who keeps hellebore in an unlabelled drawer, and keeps a boy of two days' experience to retail it to little girls, does not stand in the dock in company with his ignorant servant."

Again, we hear that no less than 24 persons have been poisoned on the south coast of Ireland through eating seeds of *Croton tiglium*, which had been washed ashore. The seeds were found and eaten by the miserable dwellers on the sea shore. Fortunately no death is known to have resulted.

Unfortunately poisonings by misadventure or with *malice prepense* have not been few in England during the month, poisonings with vermin killers in Norfolk and in Lancashire——the former case that of a female servant, Sarah Snowling, who procured some vermin killer and mixed it with the materials of a cake, which she baked, and sent for her own child, which she had placed out to nurse. The nurse divided the cake between the prisoner's child and her own children. Fortunately, the children did not like the taste of it, and ate very little, but the little they did eat made them sick. Mr. Sutton, of Norwich, proved the presence of strychnine, and the servant being found guilty, was sentenced to penal servitude for ten years.

The Lancashire case was an attempt to poison a wife by putting some vermin killer in her beer whilst at supper. The prisoner was proved to have purchased rat poison in Rochdale.

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rn. de Pharm. et de Chemie, Feb., 1874, p. 112.
†*urn. de Pharm. et de Chemie*, Feb., 1874, p. 131.
‡*rn. de Pharm. d'Anvers*, p. 49, Fev., 1874, from *Journ. de Pharm. et de*

When taken into custody he declared that he intended it for himself. He was committed for trial to the next Lancaster assizes.

An inquest was held in Liverpool on the wife of Mr. R. H. Aspinall, chemist, Leece Street, in that town. Mrs. Aspinall, who was 33 years of age, had been in the habit of taking small doses of laudanum to soothe the pain arising from spasms. An overdose incautiously taken seems to have occasioned her death.

A sad case of poisoning by mistake is reported from Hayman's Green, West Derby Village. A highly respectable elderly lady, who kept a boarding school, was discovered shortly after retiring for the night to be in great pain. She pointed to a small bottle and said she had taken something out of it which occasioned her sufferings. The drops remaining in the bottle were found to be poisonous. After suffering great agony the lady died It is stated that she suffered from tooth-ache, and doubtless had drunk the contents of the bottle, supposing that it contained a soothing draught.

A case of a somewhat similar character occurred at Wigan. A girl of 16, granddaughter of the landlord of the Shakespeare Inn, complained of a pain in her head. She had some hot gin-and-water given her: the doctor was sent for, but before he arrived the girl was dead. It is stated that a few days before she had procured from Mr. Duff, chemist, a lotion for rheumatism, which was labelled "poison," and kept in "the bar snug." It is supposed that the deceased, for some reason or other, had taken a small quantity of the lotion. The lotion was found to contain aconite in such a quantity that an ounce would cause death in a person of her age in two hours. At the inquest the jury found an open verdict, and added that so deadly a poison should not be served in an ordinary drinking bottle, or kept in a house except under lock and key.

An inquest was held at Godalming on the five members of the Coombes family who died by poison. A bucket which had contained an arsenical preparation was taken into use for domestic purposes without being properly cleansed. The appearances presented by the viscera of the deceased Mrs. Coombes were quite consistent with the assumption that she had died from the effects of arsenic. The produced food was also impregnated with arsenic. The jury returned a verdict of "Accidental death by poisoning," with a recommendation that tubs containing such poisonous substances should be labelled or destroyed after being used.

A death from chloroform is reported from Addensbrooke's Hospital, at Cambridge. The deceased was admitted to that institution for the purpose of undergoing an operation for cataract. He was told that chloroform would be used, to which he raised no objection. During the inhalation he commenced to struggle, and his pulse stopped. Every appliance, artificial respiration, and galvanism, were applied, but in vain. A post-mortem examination disclosed an increase in size and weight of the heart, but no valvular disease. At the inquest the jury found that death resulted from chloroform, but that every precaution had been taken, and blame attached to no one.

Bubble's Vermin Killer was adopted by an excitable servant girl at Struminster Newton, in Somersetshire, as a means of ending her sorrows. She seems to have been disappointed in love, and had often remarked that it would not take much to induce her to make away with herself. She bought the poison from a grocer named Potter, who was "not registered to sell poison under the Pharmacy Act." The jury added to their verdict the somewhat too late recommendation that the legislature should restrict the sale of poisons to persons duly qualified.

A singular case of suicide by Prussic acid has just taken place at Lowestoft. The son of the principal hotel-keeper applied to Mr. Sale, chemist (who has only very recently commenced business there) for some Prussic acid, for the purpose of destroying a dog. Mr. Sale, knowing him very well, let him have half an ounce, with which he retired to his bedroom and poisoned himself. No reason can be assigned for the deed.

In the papers by the last Australian mail there appears an account of an extraordinary suicide by means of pain-killer. A married woman, named Emma Johnston, living at Stawell, near Melbourne, took this mixture until she died. An inquest was held, which occupied four hours. The eldest daughter of the deceased gave evidence to the effect that her father was present when the poison was taken, and urged her mother to take more. Altogether three and a half bottles of the mixture were taken. The finding of the jury was that the woman died from drinking pain-killer in great quantity, and that the husband was guilty of wilfully allowing and inciting her to take it. He was committed on the coroner's warrant for manslaughter. The evidence of the girl went further to show that the husband had ill-treated the deceased, and was addicted to drink. The woman had written a note while her husband was out, asking him to take care of the children, and when he came home she asked him to read it. It was after this that he induced her to take two bottles more of pain-killer. The family have only recently gone to Stawell.

On March 24, Mrs. Rose, of Clifton Cottages, Grove Road, wife of Warder Rose, went to her bedroom to make the bed, and took with her their little girl Susan, one year and eight months old. The child had some toys to amuse herself with, and her mother went on making the bed. While she was so engaged, and her attention was thus diverted, the little girl got at a cupboard, and took out thence a bottle in which her father kept some lotion or embrocation, to be used outwardly for tooth-ache, and so labelled. The little girl drank some of the stuff, and her mother heard her spitting and coughing, and found what she had done. The poor little thing went off in a kind of fit, and the alarmed mother ran into a neighbour's for help. Two doctors came and administered emetics, and used hot baths. By these means the stomach was relieved of the corrosive stuff, and being further attended, the little girl became quiet during the night, and took milk and other things ordered by the medical gentlemen. Next day, however, these gentlemen had no hope of her recovery, and she died at 20 minutes past 12 that morning. The tooth-ache mixture is believed to have contained carbolic acid. An inquest was held, when a verdict was returned that she died from convulsions, brought on by drinking a quantity of carbolic acid.

THE ADULTERATION ACT AND CHEMISTS.

The following is the report of an important case tried at Glasgow on April 3, extracted from the *North British Daily Mail*:—

Robert Martin, druggist, 14 London Road, was accused of having on March 18 sold to two of the sanitary inspectors 3 drachms of powdered scammony which was adulterated with flour or other substance.

He pleaded not guilty, and was defended by Mr. Stevenson.

Alex. Johnston Walker, sanitary inspector, deponed to have bought the article. It was stated that it was adulterated. He paid 1*s.* 6*d.* for 3 drachms, which was at the rate of 4*s.* per ounce, or 3*l.* 4*s.* per lb.

Robert Green, sanitary inspector, corroborated.

Dr. Thorpe, city analyst, found that the scammony in this case had been mixed with 23·6 per cent. of flour. The amount of the true resin contained in the sample was only 46·01. There was 26·73 per cent. of other substances—vegetable tissues, such as cellulose and other matters natural to the plant—and 3·66 per cent. of ash. The 3·66 per cent. and 26·73 per cent. were necessary ingredients in the gum. An author from which he quoted gave 80 or 90 per cent. as the proper proportion of the gum. This sample contained 46·01 per cent.

By the Court—There were very great differences in scammony as imported. It was, he believed, imported in an impure as well as in a pure state. He had had samples passing through his hands which had been got by Mr. M'Leod for analysis, and which contained 80 to 90 per cent of the resin.

By Mr. Stevenson—Only some three or four cases of scammony had passed through witnesses hands. Two of these were pure and two impure. All the samples were in powder. Dr Hassall said that he could tell whether the adulteration with starch took place in Smyrna or here by examination with the microscope. If the granules of starch adhered it was mixed in

rna, and if not it was adulterated in this country. The
h granules in this case did not adhere, but he did not on
account go the length of Dr. Hassall, and draw the infer-

lis concluded the case for the prosecution. For the de-

mes M'Donald, manager of the Glasgow Apothecaries' Com-
Virginia Street, said that Dr. Martin had got scammony
them in August, 1872. It was what was usually sold as
po scammony. There was no such thing as pure scam-
to be had. It was usually mixed with starch. They did
ix it. Druggists almost invariably bought in powder. As
knew that the ordinary article as sold in Smyrna was often
erated, they added some virgin scammony when grinding
The only way in which a medical man could make the
erated article effective was by increasing the dose.
ilie Walls—Does not that make it a very difficult matter
medical man when prescribing?
tness—They know that it is adulterated.
e Fiscal—If a prescription is sent to you at the Apothecary
do you know whether it is the adulterated or pure article
s wanted?
tness—We always dispense the pure article.
ilie Walls—I have heard medical men in Glasgow complain
bitterly that they have such a difficulty in prescribing
mony because they cannot tell when it is pure.
e decision in this case was adjourned till the evidence in
following was taken.
bert Couper, chemist, 176 Castle Street, was accused of
g to the sanitary officers half an ounce of scammony which
een adulterated with flour and mineral matters.
was defended by Mr. Stevenson, and pleaded not guilty.
x. Johnstou Walker and Robert Green, sanitary inspectors,
ed to having bought the article, and paid 2*s.* for the half

Thorpe had analysed the sample. It contained 29·5 per
of flour; 5 per cent. of mineral matter, consisting mainly
lk (besides the normal 3 per cent. of ash); 47·96 per cent.
gum or resin of scammony; 14·35 per cent. of vegetable
s.
s concluded the case for the prosecution. For the defence,
gh Dykes, town traveller to Hatrick & Co., wholesale
sts, shown invoice for half a pound of powdered scammony
y their firm to accused at 32*s.*, deponed—That was a fair
for Aleppo scammony.
Wallace, analytical chemist, had made a report on scam-
which he got from Mr. Couper. His analysis showed that
tained 45·6 of resinous matter which dissolved in ether;
er cent. of other organic matters; 78·8 per cent. of ash or
al matters, and 6·4 per cent. of water. An examination
e microscope showed the presence of a considerable quan-
f wheaten starch. The sample was not pure scammony,
btained a considerable amount of adulteration. It did
owever, by any means follow that the vendor was respon-
for any of the adulterants. It was not likely that he was.
s almost impossible to get the drug free from adulteration.
etheby, in his report before the committee of the House of
mons, said that there were many adulterations of this drug
sed abroad. It was practised by the Jews at Smyrna, who
red it for the English market. Chalk and starch were
in the course of this preparation, to prevent it under-
decomposition. Dr. Hassall, in a similar report, said that
f thirteen samples as imported only one was genuine,
ng 79·6 per cent. of resin. The amount of adulteration
l from 8 to 75 per cent. of added substances. One sample
ntirely factitious, containing no scammony at all. The
rating ingredients were mostly carbonate of lime or chalk,
, flour, gum, and a considerable proportion of woody fibre.
enteen samples of powdered scammony purchased from
is druggists in London one only was genuine, yielding
er cent. of resin. The adulterants varied from 18 to
cent. The proportion of resin varied from 27·2 to 65·6
nt. Wheat flour, frequently some chalk, and occasionally
r some other substance, were the adulterating ingredients.
r's might be accepted as an average sample.
Fiscal said there was no description of adulteration that
be put down more strongly than the adulteration of
He thought the evidence both for the prosecution and
e defence showed that it was a general practice to
rate scammony—a practice which should be put down.
Stevenson, for both of the accused, said that these drugs were purchased in the usual way of highly respectable druggists, and the article was that ordinarily sold in the town. He thought it was hardly a case to impose a fine.

The Assessor had no hesitation in saying that the charges must be found proven in the sense that the scammony was sold as unadulterated, and was found to be adulterated. If the adulterated article was to be sold, then intimation must be given to the purchaser.

Bailie Walls then fined each of the accused 20*s.*, with 20*s.* expenses in each case.

CHARGE OF MANSLAUGHTER AGAINST A CHEMIST.

Mr. Samuel Goss, chemist, was sent for trial to the Devon Assizes, charged with the manslaughter of a woman. Mr. Goss carried on business at Braunton, and was consulted by the deceased woman for a wound on her breast. He prescribed for her a solution which was a strong preparation of sulphate of zinc. Mr. Justice Quain directed the jury to ignore the bill, as there was no proof either of gross negligence, criminal negligence, or of gross ignorance in treating the case.

REVIEWS

ASSAYING.*

Although many valuable books have been published on the subject of metal assaying, a small, compendious, and practical manual for the use of explorers and persons interested in mining and metallurgical operations has long been a desideratum. Most of the standard works with which we are acquainted are either too bulky for carrying about, or they enter so deeply into the chemistry of minerals as to require a far greater amount of knowledge for mastering their details than is generally possessed by the persons seeking for information. Both these drawbacks are avoided in the very useful little book before us. The greatest care has been taken by the author to simplify and condense the description of each process as far as possible, and the instructions are sufficiently clear and concise to enable anyone with but a limited knowledge of chemical manipulation to perform the various operations with ease and precision. In the chapter on copper assaying he confines himself entirely to the precipitation process, as practised in the large smelting establishments of Chili, and rejects the dry method as being too uncertain and inaccurate in its results. An opinion of this kind is expressed by Mitchell, who also proves by a number of analyses that the mean difference of yield is 1·350 per cent. in favour of the precipitating process. The assays of silver and gold are described at considerable length, and the copious tables at the end of the book for determining the standard of silver alloys, and for estimating the value of gold and silver ores, will prove valuable to those who know how much time is consumed in making the necessary calculations. It would have been well if the author had avoided the use of the "teaspoonful" as a measure of liquids. Teaspoons vary in size to such an extent as to render them useless for measuring purposes, and they are, moreover, easily acted upon by strong acids. We would suggest the substitution of the term "fluid drachm" in future editions. Considering the important position occupied by the metals in the industrial and commercial interests of the world, the discovery of fresh sources of mineral wealth becomes every day more urgent, and a little work of this kind, which will enable travellers and explorers, at the cost of a very small outlay for apparatus, to determine the commercial value of a mineral is likely to prove extremely useful.

The Export Merchant Shippers of London (1874), published by Messrs. Dean & Son, is an admirably compiled and eminently useful directory of the London firms having relations abroad. It contains, besides an alphabetical list of names and addresses, a classification of the firms according to the class of goods chiefly shipped, and also according to the countries to which they export. The information will be found very valuable to manufacturers and specialists.

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* *The Practical Assayer.* By Oliver North. London: Chatto & Windus.

Correspondence.

THE COCOA QUESTION.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—In the paper recently read before the Society of Arts by Mr. Holm, we are surprised to find that he reiterated the same arguments as to the *necessity* for adding starches to cocoa.

These mixtures are no doubt wholesome, provided they are thoroughly boiled; otherwise (as was clearly shown by Mr. Bartlett, who spoke on Mr. Holm's paper) they are not digestible, this being frequently the cause of "soluble cocoa" disagreeing with delicate and dyspeptic persons.

But there are much more important subjects involved in this portion of the question. Cocoa, as Mr. Holm himself showed, contains about 20 per cent. of albuminoid constituents, and he adds, "These are classed amongst the nitrogenous principles of food, *and their presence renders cocoa one of the richest flesh-formers we have.*"

It will therefore be seen that every pound of starch or sugar added (both being heat-givers, and not containing any nitrogenous element) will reduce its value as food in the same ratio.

The most important constituent of cocoa, that which constitutes its stimulating and refreshing element, is theobromine, or the alkaloid principle, on which Mr. Holm remarks: "In regard to these alkaloids, it is interesting to note that throughout the world the instinct of man has led him to seek some substance which contains one of these principles, which owe their value to the specific influence they exert on the nervous system, stimulating it and checking waste of tissue."

It will again be seen that the proportion of this important constituent is reduced in exact ratio to the amount of starch and sugar added.

It would be as sensible to add starch to tea and coffee as to add it to cocoa, except for the plea that such addition renders cocoa more easily miscible.

Progress in science and mechanism has rendered this antiquated plea unnecessary, for by expressing the *excess* of butter from the cocoa—as we do in preparing our cocoa essence—the necessity of adding starch is dispensed with, and, consequently, the proportion of nitrogenous and alkaloid principles is *considerably increased*, instead of being diminished.

The abstraction of a portion of the butter renders cocoa easily miscible, and is not only much more valuable in a dietetic point of view, but is far more refreshing and delicious in flavour and aroma.

The assertion that has been made, that the extraction of the butter from cocoa "is analagous to the abstracting of cream from milk," is incorrect in *fact* and in the *idea* it conveys, because *the whole of the butter is never abstracted* in the manufacture of genuine soluble cocoa. The addition of starch to attain the same result (viz. suspension in the cup), reduces the proportion of cocoa-butter to the same extent as by the *extraction* of the butter:—

Cocoa essence contains:

Cocoa butter	19·22
Albumen and other component parts of cocoa..	80·78
Total	100·00

The best homœopathic cocoa contains:

Starch and sugar added	53·00
Cocoa-butter	20·15
Albumen and other component parts of cocoa..	26·85
Total	100·00

The proportions of cocoa-butter given in these tables are from Dr. Muter's analyses.

Cocoa-butter is both nourishing and wholesome, but owing to the large proportion (50 per cent.) that cocoa contains the addition of starch renders it an emulsion that may fairly be compared to melted butter, which is likely to disagree with many constitutions, and cannot be refreshing, as a beverage should be.

Yours sincerely,

CADBURY BROS.

Trade Memoranda.

Mr. Mason, chemist, of Weymouth, has retired from business. He is succeeded by Mr. Charles G. Targett.

Mr. Walford, chemist, of the same town, has also retired from the trade, and is devoting his attention to farming: he has disposed of his business to Mr. Williams.

Mr. Rackham, chemist, of Norwich (of Liver Pill notoriety) has just opened another branch business in Little Offord Street in that city.

Messrs. Payne & Chapman, of Piccadilly, Manchester, have dissolved partnership. Mr. Payne continues the business in Piccadilly, and Mr. Chapman has taken a shop at Brasenose Buildings, Deansgate.

Mr. James Firth, whose connection with the CHEMIST AND DRUGGIST dates from its birth until modern times, has left London and joined the firm of Brierley & Firth, Manchester, publishers of *Brierley's Journal* and other productions.

Mr. J. Hickisson, of Southgate Road, is supplying indiarubber teats, with shields of the same material attached, the latter ventilated, mounted a dozen on a card. They are supplied at a marvellously low rate.

RENDALL'S THEOBROMINE OR CONCENTRATED COCOA.—Our attention has been called to the great improvement in style and quality of this preparation, which, the proprietor informs us, is obtaining an increasing demand, both at home and in the colonies. We have tested the cocoa, and can recommend it as a pure and delicious beverage. Mr. Rendall informs us that he has legally obtained back in his own hands the business lately carried on by the Theobromine Company, and that he has appointed Messrs. J. Sanger & Sons, 150 Oxford Street, chief wholesale agents, to whom orders may be sent, or direct to himself, 28 Queen Street, Exeter.

We have received from Messrs. Treble & Son, of Hoxton, one of the handsomest catalogues published in connection with the chemist's business. It contains nearly a hundred pages, and is illustrated with such excellent drawings of show cases, dispensing counters, shop-fronts, and every requisite of shop-fitting, that it offers as ready a means of selection as a well-supplied show-room itself. Prices and full details are given in every case, and we are confident that those who consult this catalogue will endorse our opinion of it, while, from what we know of Messrs. Treble's workmanship, we may also take upon ourselves to say that those who purchase from it will have equal reason for satisfaction.

Messrs. Dows, Clark & Co., the eminent American soda-water machinists, have been obliged to vacate the convenient premises occupied by them for the past four years at the corner of Chandos and Bedford Streets, in consequence of the expiration of the lease. They have been fortunate enough to secure an equally eligible location at what was the large drapery establishment known as Compton House, Frith Street, Soho Square. Here they make a fine display of their various styles of soda-water apparatus, generators, syphons, &c. The firm have just issued a new catalogue of their manufactures, with excellently illustrated descriptions of everything they supply.

Messrs. Langton, Harker & Stagg have sent us a sample of an aromatic bitter wine of iron introduced by them. The preparation has its virtues no doubt; but in the interest of dispensers we would urge manufacturers who devote their skill to the production of such compounds to bring them forward as patent medicines. The example of the United States may serve as a warning. There an unlimited number of "elixirs" have been pushed on to the medicine market, and the poor dispenser is hourly worried by an order for somebody's elixir which he has never yet kept. The profit on prescriptions is soon reduced to nothing, if out of it the chemist has to buy small quantities of private preparations, the bulk of which, perhaps, he will never use.

ISED TERMS.—Announcements are inserted in this column at the rate e halfpenny per word, on condition that name and address are added. and address to be paid for. Price in figures counts as one word.
name and address are not included, one penny per word must be A number will then be attached to the advertisement by the sher of the CHEMIST AND DRUGGIST, and all correspondence relating must be addressed to the "Publisher of the CHEMIST AND DRUGGIST, ial Buildings, Cannon Street, London, E.C.," the envelope to be ed also with the number. The publisher will transmit the correence to the advertiser, and with that his share in the transaction will

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FOR DISPOSAL.

os. "The Lancet" for 1873, complete, price 10*s.* 28/232.

ic's "Chemistry," 9th edition, 5*s.* 12/231.

t 4 gross stoneware ginger-beer bottles, second hand, offers wanted. Corke, Chemist, Ticehurst.

rmaceutical Journal" for 1873, in weekly numbers, 2 missing. 15/231.

6 cwts. blacklead: offers wanted, sample will be sent. Fletcher, Chemist, Nottingham.

pound student's microscope, almost new; cost 5*l.* Also a number of objects. The lot, 3*l.* 10*s.* 20/231.

rating machine, Hewitt's patent, smallest size, for 8-inch mortar, in good working order. Offers wanted. 6/232.

all's Materia Medica Cabinet, good condition. What offers? Marshall, chemist, 22 Wavertree Road, Liverpool.

grain pill machine, to cut 18, good condition. Price 6*s.* 30/231.

teen bottles Leeming's essence, 20*s.*, carriage paid. Fortune, chemist, Anstruther.

hall's "Materia Medica." Quite new. Cost 25*s.*. Price 18*s.* 6*d.* Statim, C. Williams, Chemist, Pembroke Dock.

ham's "Flora." Perfectly new. Uncut. 31*s.* 6*d.* (Published at 3*l.* 10*s.*) 1/232.

all, flat stone grinding mill; may be worked by hand or steam power; suitable for chemists' use. Apply, R. H., 101 High Holborn, W.C.

dman's Powders, 100 gross, may be had by the single dozen at 9*s.* 3*d.* post paid. Send remittance (P.O.O.) with order. Apply, Wilkins, Tenterden, Kent.

h-stopping and sealing instruments, as figs. 17 and 18 Maw's catalogue, new and perfect. What veterinary books in exchange? Leeney, Post Office, Arundel.

ffice table, 5 feet, mahogany, 3*l.* 3*s.*, cost 6*l.*; two 8-gallon show carboys, stopped, 18*s.* each; large air pumps, a bargain. C., 151 Hoxton Street, N., London.

t of fine flake manna, 2*s.* 4*d.* per lb.; 2 small nests of drawers and sundry cases; about 6 dozen drug bottles and various fittings. Apply, 87 Old Chester Road, Tranmere.

Cabinet of Materia Medica and botany specimens, cost over 3*l.*, equal to new. Send offers to W. Gilder's, 8 Osborn Place, Blackheath.

Twenty-five-ounce tin Unbleached Quinine. Best maker. Quite fresh. Never opened. No reasonable offer refused. Advertiser going abroad. 14/232.

Herbarium, containing the officinal and 70 other plants. Recently and beautifully mounted. 10*s.* 6*d.* Richard Bennison, Mr. Fawcett, New Ferry, Birkenhead.

Eleven quarts, four pints of Freeman's Annatto. Cod-liver Oil Pills, 18 at 7½*d.*, seven at 13½*d.*, two at 2*s.* 9*d.* Soiled covers. What offers? Cocking, Sittingbourne.

Offers wanted for 3 handsome carboys, cut stoppers, hold about 6 or 7 gallons, with mahogany stands; also specie jar to match, labelled, with pharmaceutical arms. 32/232.

A magnificent 8-aired Mandoline musical box, handsome inlaid case, quite new, very fine, price 8*l.* 10*s.*, cost 14*l.*; also an 8-aired sacred box, fine tone, only 5*l.* Chemicus, 151 Hoxton Street, N., London.

Three Pear Globes, plain; centre 24 inches; other two 20 inches. Burrow's Soda Water Racks, two, three, and four dozen. Six Hampson's Fluodentine, all at 40 per cent. off cost price, or exchange. Jackson, Blackpool.

A very handsome pair of Counter Scales, box end beams. Height of brass pedestal, including ornamental brass knobs, 27 inches. In perfect condition. Now in use. Cost 60*s.*; price 30*s.* H. Story, 43 Fish Street Hill, E.C.

Entire contents of a Chemist's Shop for sale. 20 per cent. off list prices. Stock recently bought from best houses. Glass cases, bottles, &c., at low prices. All good as new. Inventory for one stamp. J. Floyd, Bury St. Edmunds.

One dozen sets of forceps, Tome's pattern; circular joints; best make; in cases. Sent, on approval, at 30*s.* and 45*s.* per set. Address, J. Garforth, 14 Netherthorpe Place, Sheffield.

Royle's "Materia Medica;" Galloway's "First Step in Chemistry;" Day's "Physiological Chemistry;" Newth's "Natural Philosophy;" Macadam's "Practical Chemistry;" "Virgilii Opera;" brass retort stand, 22 inches high. H. Woolnough, Maddermarket, Norwich.

Plate-glass, 36 inches high, 21 inches wide, with gold embossed scroll, and lettered "Chemist and Druggist," price 21*s.*; dispensing scales, Maw's Fig. 7, 15*s.*; pint veterinary syringe in box, with extra bent pipe. "Chemist," Madeira Place, Torquay.

Garrod's "Materia Medica," 3rd edition, 8*s.*; Squire's "Companion," 5th edition, 4*s.*; Gregory's "Chemistry," 2nd edition, 6*s.*; Stockhardt's "Chemistry," 5*s.*; Bowman's "Chemistry," 3*s.* 6*d.*; Darby's "Chemistry," 3*s.* 6*d.* John O. Littlewood, Sutton in Ashfield, Notts.

Winslow's, Holloway's, Parr's, Kay's, Steedman's, Whelpton's Fenning's, Cavania's, Rackham's, Hooper's, Stedman's, Woodcock's goods, and all leading patents, at 9*s.* and 24*s.* dozen; 10*l.* orders, carriage paid; cash with order. Drury, Chemist, Lincoln.

Large astronomical and day telescope, brass body, and tripod stand, 3-inch object glass, 2 eye-pieces, in polished case, quite new, only 6*l.* 15*s.*; a capital instrument for the seaside; cost double. Chemicus, 151 Hoxton Street, N., London.

Microscope (first-class large), by Matthews, mechanical stage polariscope, spot lens; also two 1¼ first-class English objectives, ½ and 1 inch combination objectives, with condensor, in case, only 10*l.* 10*s.*; cost 21*l.*; bargain. Chemicus, 151 Hoxton Street, N., London.

A few hundred gross good vial corks remain, offers requested; 200 gross soda water bottles, 19*s.* gross. Merchant, 60 Silchester Road, Notting Hill, W.

Good pill machine for 12; about 3 lbs. balsam Canadensis; 1 lb. balsam Peruvian. Offers wanted. Best, Chemist, Darlington.

Iron mortar and pestle, diameter 14 inches, good condition. Cash offers. "Cæsar," 10*d.*; Giles' "Interlineal Cæsar," 1*s.* 6*d.*; "London Pharmacopœia," Latin, 1*s.*; Latin Grammar (Edward Sixth's), 1*s.* 6*d.*, published 3*s.* 6*d.* Day, 123 Gray's Inn Road, W.C.

Two 1½-inch sashes, 6 feet 2 inches by 3 feet 10 inches; 16 squares glass in each—been used as slides to shut in a window; 2 volumes Dr. Aitken's "Science and Practice of Medicine," published at 32*s.* 6*d.*; three 2-gall. pear-shaped show carboys, 5*s.* each. Albert Ellis, Chemist, Bracknell, Berks.

Will be sold for best offers: Lot of 8*s.* 6*d.* and 12*s.* Siegel's steam spray apparatus; several Nodder's 5*s.* 6*d.* electro-silver breast exhausters and 6*s.* feeders; also few Mamima & Maw's patent 2*s.* 6*d.* feeders; lot of pint and quart Bunsen's batteries, circular. Hatch, Isaac & Co., Clifton, Bristol.

A nest of drug drawers, deal all through, solid divisions, and back to carcase, fronts painted to imitate mahogany, price, including good lockers beneath to match, 4*l.* 10*s.*; also 21 4-lb. white jars (as Maw's fig. 1), gold labelled, nearly equal to new, 1*l.* 15*s.* G. Beall, 69 Holderness Road, Hull.

12-gall. copper still and worm tub, cost 10*l.*; 120 packets Gillard's spice, 55*s.*; Sike's hydrometer; 2 lb. Bals. Canada, 4*s.* 6*d.*; 1 cwt. treacle cistern, patent tap, 6*s.*; surgeon's sea chest, 35*s.*; 4 lb. hyd. bisulph. Ang., 20*s.*; superior beam scales, 17 inch beam, 35*s.*; odd box and beam, 3*s.* 6*d.*; books, &c.; 4 gross harness blacking tins, 30*s.* R. C. Mason, Bromsgrove.

Four 6-gall. oil cisterns, with brass taps and drop tins for the same, 25*s.*; 9 pair of tooth forceps, 2 lancets and mahogany case, 20*s.*; also, window enclosure 11 feet long, 3 feet 4 inches high, with three large glass squares in the top, 30*s.*; 2 elbow gas brackets for each end of window, 4*s.*; 1 mahogany case, 4 feet long, 2 feet wide, will do for either upright or flat case, 40*s.*, cheap. S. Parker, 360 Leeds Road, Bradford.

Handsome glass tablet, gilt and maple frame, 40 by 30 inches, "Prescriptions carefully prepared," Royal arms, three other lines, 3 guineas, cost 8; 2-gallon Liebig's condenser, tin, copper jointed, 7*s.* 6*d.*; counter, 16 feet long, two 8-feet parts painted oak, mahogany top 18 inches wide, drawer-shelves, divided till, patent lock, two ground-glass partitions, framed, 2*l.*, nearly new. J. Beddard, 46 Churton Street, Belgrave Road, S.W.

100 gold-labelled drawers (with framework), part mahogany fronted, the remainder painted mahogany, and glass knobs, price of entire lot, including packing, 5*l.*; 5 gross paraffin chimneys of the best clear glass of various sizes, 14*s.* per gross, crates free, cost 18*s.*; 23 12-yard rolls of 1 inch and 1¼ inch paraffin cotton for 1*l.*; 4-grain pill machine, to make 24, in excellent condition, 12*s.* All the above may be seen at Frederick Gibson's, Chemist, 93 Gooch Street, Birmingham.

Watt's "Chemistry," 5 vols., 3*l.* 15*s.*, with supplement, 6 vols., 1872, 7*l.* 7*s.*; Ure's "Dictionary," 3 vols., last edition, 4*l.* 10*s.*; Miller's "Chemistry," 3 vols., 1872, 2*l.* 15*s.*; Quain's "Elements Anatomy," 343 woodcuts, 2 vols., 16*s.* (published 40*s.*); Quain & Wilson's "Anatomical Plates," 200 fine plates, the vessels coloured, 5 large vols., 5*l.* (cost 12*l.*); Percival's "Hippopathology," 25*s.*; Muspratt's "Chemistry," complete parts, 2*l.* Chemist, Church Street, Hadleigh, Suffolk.

Useful exchanges for drugs, sundries, &c. Send stamp for list. Carrington, Wincenton.

About 21 lbs. of Crystallised Tartaric Acid. What offers? Wrangham & Hardy, Malton.

Glass cylindrical electric machine, complete (with valuable appliances for numerous experiments), in case about 2 feet square, 3*l.* 10*s.*; not one-third value. Also, Thomson's "Dispensatory," 3*s.* 9*d.*; Laurie's "Domestic Medicine," 6*s.* 6*d.*; Rose's "Chemistry," 3 vols., 8*s.* 6*d.*; Hogg's "Vegetable Kingdom," 3*s.* 6*d.*; Wilson's "Inorganic Chemistry," 2*s.* 3*d.*; "Principia Latina," Part II., 1*s.* 9*d.*; Morell's "Grammar," 2*s.*; Chamber's "Latin Grammar," 1*s.* 6*d.* Address, Mr. Roberts, 37 Milton Street, Newcastle.

Volumetric analysis, complete set of apparatus, including burettes (Mohr and Gay-Lussac), pipettes, graduated flasks 1,000 c.c., 500 c.c., 200 c.c., 100 c.c.; 1,000 dcm., 500, 2[illegible] and 100 do. Platinum capsule; copper water bath, copper air bath; Hoffmann's gauze gas burner, blow-pipe jet; iron tripod stand; chemical thermometer to 42[illegible] Fahr.; retort stand and every variety of instrument for volumetric analysis—never used, and arranged by Sutton. Cash; half price, as per invoice. H. Smith, 29 St. Stephen's Road, Shepherd's Bush.

Cooley's "Encyclopœdia Practical Receipts," 16*s.*; Fownes' "Chemistry," ninth, 7*s.* 6*d.*; Copland's "Dictionary Practical Medicine," parts 1 to 13 inclusive (part 2 wanting), 10*s.* (cost 3*l.* 7*s.* 6*d.*); Cullen's "Physiology," Maw's "Vegetable Physiology," Davis' "Acute Hydrocephalus," Sampson's "Homœopathy," Quin's "Pharmacopœia Homœopathica," Scott's "Diseases, Joints," Thomas' "Guernsey's Homœopathic Practice," Bingham "On Bladder," "Truths, and their reception in relation to Homœopathy," 2*s.* 6*d.* each, free. A. Davis, 161 Seven Sisters' Road, London, N.

5,000 second-hand gold labelled or engraved shop bottles, for syrup, oil bottles, with glass caps; black glass stock, with japan or gilt covers; blue, white shop jars, as fig. 1 Maw's catalogue; specie, show jars, with glass or japan covers, carboys, composition, marble, glass, iron mortars and pestles, funnels, percolators, tincture presses, retort stands, shop lamps, &c.; all sizes of above. Entire fixtures of three chemists' shops, including counters, drawers, window enclosures, show cases, desks, &c. Large and superior stock of a drug and chemical broker, consisting of gum arabics, shellacs, orange, button, garnet, scammony, gamboge, opium, ammoniacum, assafœtida, &c., jalap, rhubarb, ipecac., Calumba roots, Alexand., Tinnevelly seuna, senna various, saffron, safflower, indigo, lac dye, aloes, Cape Barbadoes, Socotrine, iodide, bromide potassium, strichnine crystals, Prussiate potash, Tartaric, citric acids, essential oils; various and numerous other goods. All the latest patents, 9*s.* per dozen; Stedman's, 7*s.* 3*d.* Stamps for list. Lloyd Rayner, 309 New North Road, Islington, London.

WANTED.

A "British Flora." Walter Piper, Bank Plain, Norwich.

Cupping machines in boxes, complete, good condition, cheap. Price, &c., A. Anholm, Hull.

"Chemist and Druggist" for September, 1872. F. Dutton, Chemist, Bolton.

To exchange Autograph Prescriptions for the formation of a prescription book. 18,131.

"London Pharmacopœia" (Latin) and "Selecta e Prescriptis." W. Caven, Hillside, Dalbeattie.

A water-bed; state size, condition, and price; also air-cushions. Address, Clifton, Corn Market, Derby.

. 2 The People's Printing Press, by Berri. State price and condition. Geo. Vennall, Cranleigh, Guildford.

st of Drawers for back of counter. State dimensions, number and size. G. Jeffery, Tring, Herts.

r-book of Pharmacy"; a set, or any volumes. Fuller & Co., Norwich.

lation of "Pharmacopœia Londinensis." D. Llewellyn, 59 Vauxhall Road, Liverpool.

e Ice-chest of best construction. State price. Humphries, Garston, Liverpool.

ht Show Case for counter, &c. Best, Chemist, Darlington.

st-iron mortar, about pint size; bell shaped. "Alpha," 13 Whitefriargate, Hull.

bright glass case, about 4 feet long, with tablet on top: "Dispensing Department" or "Prescriptions Prepared." Particulars to Albert Ellis, Chemist, Brackuell, Berks.

er's pill machine, with piping machine, complete, and guaranteed good working order. Cash; price to A. Anholm, Hull.

mall mill or machine for grinding ginger, both fine and rough (reasonable). Henzell, Chemist, Newcastle-on-Tyne.

Medicine Chests for ten men, and also sundry glass tubing, hair restorer, Beasley's last editions "Formulæ and Receipts." 35, 231.

Hall's or Evans' "Cabinet of Materia Medica," in good condition and perfect. Late edition. Rd. Bamison, Mr. Fawcett, New Ferry, Birkenhead.

ood-sized "Vasculum," Oliver's "Elementary," and Babington's "Manual of Botany." Higginson, New Ferry, Birkenhead.

emist and Druggist" for October, 1869, and January, 1870. Full price and postage. Thorburn, Chemist, Bishop Auckland.

ers for lilac jars, as fig. 1 in Maw's catalogue; two dozen 3½-inch and one dozen 6-inch, inside measurement. Kitson, Worcester.

TRADE REPORT.

HE near approach of "Budget night" renders superfluous any comments at this moment on public finance. What is e will be, and the country awaits with a quiet but keen osity the display of Sir Stafford Northcote's good things. Government seems to have surmounted the technical diffiy which some amateur financiers discovered as to the ssity of re-imposing the income tax before March 31 if it to be re-imposed at all. No movement was made, but no supposes that Mr. Gladstone's programme in respect to that is now to be carried out. Indeed, the threat of its extinction ns to have awakened a most marvellous and unsuspected tion in its favour, which will no doubt greatly strengthen the ls of the Conservative ministry. But that body will do a derfully clever thing if it manages to retain as many friends r April 16 as before it. Somebody will most assuredly have e disappointed this time, spite of the magnificent surplus, which is the most awkward legacy the Liberal party has left. One thing, at least, we hope to see in the forthcoming budget, and that is a still further lightening of the pressure of the income tax on the more moderate class of incomes. Mr. Lowe took a step forward in that direction last year, and Sir Stafford Northcote will certainly adopt a just as well as a popular policy if he follows that lead.

The Board of Trade Returns up to March 31 indicate clearly enough that the full tide of prosperity which characterised last year is not being fully maintained. The grand total of the declared value of the exports for the first three months of 1874 is 57,802,084*l.*, against 62,376,366*l.* in the corresponding period of 1874. But a closer examination of the figures shows that they are not very alarming after all. The first three months of 1872 showed scarcely so high a figure as those of 1874; but the total for the year was higher by nearly a million than 1873. The explanation which these statistics present is, that the magnificent flow of commercial prosperity which has given such a splendid result to our national revenue occupied mainly the last nine months of 1873 and the first three months of 1874. The period of reaction did not commence with the first of January, although it can hardly be termed a reaction at all. The figures are still most satisfactory, and, with most branches of our industry in a satisfactory condition, there is still plenty of hope for a solidly, if not for a brilliantly, prosperous year.

The chemical markets seem to be getting more than their fair share of the general depression, and the tone of the chief circulars is becoming monotonously plaintive. The supply of nearly all chemicals, especially the heavy ones, is beyond the demand, and buyers for prompt delivery find little difficulty in securing advantageous terms. The Newcastle manufacturers held a meeting on March 30, and they are trying to check the manufacture, so as to keep up something like reasonable prices until a better influx of orders sets in. Nominally, quotations remain much as they were last month, but parcels at second hand are continually being sold at a shade lower than market prices. In the midst of the general decline quicksilver still proceeds calmly on its upward course, a further 5*s.* advance having brought it within 5*s.* of twenty pounds per bottle. Quinine is resuming its normal figure now that the Government orders have ceased. Iodine is unchanged. Brimstone is on the rise, and sales have been free. Holders of lemon juice, too, are it is said, very decided in their demands.

The chief feature of the drug sales has been a lively demand for Cape aloes, a good enquiry for rhubarb, especially of best quality, neglect of opium, a more abundant supply of camphor, and considerably lower prices for cloves. Balsam of copaiva is in better supply, and is quoted lower; spermaceti is scarce and will probably become dear. Ceylon and Neilgherry cinchonas have been put up at the auctions again and sold freely. Best qualities of the latter reached 2*s.* 5*d.*; of Ceylon, 1*s.* 11*d.* A general absence of speculation all through the drug market leaves but little to report.

Oils.—Crude sperm is very scarce, and cannot be obtained for less than a hundred guineas per ton. Linseed hardly maintains previous values. Olive is decidedly weak, and holders both in London and Italy seem inclined to yield. Some Gallipoli oil, at public sale last week, obtained an offer of 44*l.* 15*s.*, but 47*l.* was the reserve price. The same class of oil has since been parted with at 46*l.* Rape is lower too, and is now worth buying. Turpentine, both American and French, follows the same tendency, and is being sold at 32*s.* 9*d.* and 32*s.* 6*d.* per cask respectively. To complete the list, refined petroleum has lost another halfpenny per gallon since last month, though it is reported to be a trifle firmer in America.

The conclusion of the Easter holidays is generally the signal for a development of business, which we hope we may have to report in our next.

Monthly Price Current.

The prices quoted in the following list are those actually obtained in Mincing Lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.

CHEMICALS.	1874.				1873.			
	s.	d.		s. d.	s.	d.		s. d.
ACIDS—								
Acetic .....per lb.	0	4	to	0 4½	0	4½	to	0 0
Citric ..... „	4	5	..	0 0	4	9	..	0 0
Hydrochlor.....per cwt.	4	0	..	7 0	4	0	..	7 0
Nitric .....per lb.	0	5	..	0 5½	0	5	..	0 5½
Oxalic ..... „	0	7	..	0 7½	0	9¾	..	0 10
Sulphuric ..... „	0	0¾	..	0 1	0	0¾	..	0 1
Tartaric crystal.. „	1	7	..	1 7½	1	7½	..	1 8
powdered „	1	7	..	1 7½	1	7½	..	1 8
ANTIMONY ore .....per ton	200	0	..	240 0	320	0	..	560 0
crude .. per cwt.	0	0	..	0 0	0	0	..	0 0
regulus .. „	0	0	..	0 0	0	0	..	0 0
star..... „	50	0	..	52 0	62	0	..	64 0
ARSENIC, lump..... „	20	6	..	0 0	20	6	..	0 0
powder.... „	10	0	..	10 3	10	6	..	11 3
BRIMSTONE, rough ...per ton	127	6	..	145 0	125	0	..	150 0
roll .. per cwt.	10	0	..	0 0	10	0	..	0 0
flour.... „	11	6	..	12 6	11	6	..	12 6
IODINE, dry .....per oz.	1	0¼	..	0 0	1	1	..	0 0
IVORY BLACK, dry .. per cwt.	8	6	..	0 0	8	6	..	0 0
MAGNESIA, calcined..per lb.	1	6	..	0 0	1	6	..	0 0
MERCURY .....per bottle	395	0	..	0 0	275	0	..	280 0
MINIUM, red ..... per cwt.	25	0	..	25 3	21	3	..	21 6
orange .. „	37	0	..	0 0	32	6	..	0 0
PRECIPITATE, red . per lb.	6	2	..	0 0	4	7	..	0 0
white „	6	1	..	0 0	4	6	..	0 0
PRUSSIAN BLUE .. „	0	0	..	0 0	0	0	..	0 0
SALTS—								
Alum ..... per ton	170	0	..	180 0	165	0	..	170 0
powder..... „	190	0	..	0 0	185	0	..	190 0
Ammonia:								
Carbonate ..... per lb.	0	7	..	0 7¼	0	7½	..	0 7¾
Hydrochlorate, crude, white ..... per ton	650	0	..	0 0	640	0	..	0 0
British (*see* Sal Am.)								
Sulphate..... per ton	335	0	..	350 0	370	0	..	375 0
Argol, Cape .....per cwt.	87	6	..	96 0	80	0	..	90 0
Red..... „	75	0	..	82 6	65	0	..	76 0
Oporto, red. „	28	0	..	32 0	32	0	..	32 6
Sicily ..... „	52	6	..	57 6	60	0	..	70 0
Ashes (*see* Potash and Soda)								
Bleaching powd...per cwt.	10	6	..	0 0	13	9	..	14 0
Borax, crude..... „	40	0	..	85 0	55	0	..	75 0
British refnd. „	75	0	..	0 0	105	0	..	0 0
Calomel .....per lb.	5	9	..	0 0	4	2	..	0 0
Copper:								
Sulphate ....per cwt.	28	0	..	28 6	31	6	..	32 0
Copperas, green..per ton	60	0	..	62 6	60	0	..	62 6
Corrosive Sublimate p. lb.	5	0	..	0 0	3	6	..	0 0
Cr. Tartar, French, p. cwt.	111	0	..	112 0	110	0	..	0 0
brown „	95	0	..	100 0	95	0	..	102 6
Epsom Salts ....per cwt.	5	9	..	6 3	5	9	..	6 3
Glauber Salts .... „	4	6	..	5 6	7	6	..	0 0
Lime:								
Acetate, white, per cwt.	14	6	..	21 0	14	0	..	22 6
Magnesia: Carbonate „	42	6	..	45 0	42	6	..	45 0
Potash:								
Bichromate ....per lb.	0	6½	..	0 0	0	8½	..	0 0
Carbonate:								
Potashes, Canada, 1st sort .....per cwt.	35	0	..	0 0	37	6	..	0 0
Pearlashes, Canada, 1st sort .....per cwt.	46	0	..	0 0	49	0	..	0 0
Chlorate .....per lb.	1	0½	..	1 1	1	8½	..	1 9
Prussiate ..... „	1	1½	..	0 0	1	5¼	..	0 0
red .... „	2	10	..	2 11	3	1	..	0 0
Tartrate (*see* Argol and Cream of Tartar)								
Potassium:								
Chloride.....per cwt.	6	9	..	7 0	8	9	..	9 6
Iodide .....per lb.	16	0	..	0 0	0	0	..	0 0
Quinine:								
Sulphate, British, in bottles .....per oz.	7	2	..	0 0	7	8	..	0 0
Sulphate, French „	7	2	..	0 0	7	8	..	0 0
Sal Acetos .....per lb.	0	10	..	0 0	1	1½	..	0 0
Sal Ammoniac, Brit. cwt.	44	0	..	45 0	48	0	..	49 0
Saltpetre:								
Bengal, 6 per cent. or under .....per cwt.	21	6	..	22 6	28	9	..	29 6
Bengal, over 6 per cent. per cwt.	19	6	..	21 3	27	0	..	28 6
British, refined „	27	0	..	27 9	32	0	..	32 6
Soda: Bicarbonate, p. cwt.	16	3	..	16 6	20	6	..	0 0
Carbonate:								
Soda Ash ..per deg.	0	2⅜	..	0 0	0	3¼	..	0 0
Soda Crystals per ton	105	0	..	0 0	145	0	..	0 0
Hyposulphite, per cwt.	16	0	..	0 0	0	0	..	0 0
Nitrate .....per cwt.	11	6	..	12 6	15	9	..	16 0
SUGAR OF LEAD, White cwt.	47	0	..	48 0	45	0	..	0 0
SUGAR OF LEAD, Brown, cwt.	32	6	..	33 0	30	0	..	0 0
SULPHUR (*see* Brimstone)								

	1874.				1873.			
	s.	d.		s. d.	s.	d.		s. d.
VERDIGRIS ..... per lb.	1	1½	to	1 6	1	1½	to	1 2
VERMILION, English „	5	4	..	0 0	4	2	..	4 4
China „	5	0	..	0 0	4	0	..	4 4
DRUGS.								
ALOES, Hepatic ....per cwt.	80	0	..	200 0	80	0	..	220 0
Socotrine .. „	110	0	..	240 0	160	0	..	320 0
Cape, good.. „	39	0	..	42 0	30	0	..	32 0
Inferior .... „	25	0	..	38 0	20	0	..	29 0
Barbadoes .. „	60	0	..	200 0	70	0	..	190 0
AMBERGRIS, grey.....oz.	24	0	..	46 0	26	0	..	30 0
BALSAM—								
Canada.....per lb.	2	8	..	2 10	3	0	..	0 0
Capivi ..... „	2	6	..	2 7	2	8	..	2 0
Peru ..... „	5	0	..	8 1	9	3	..	0 0
Tolu..... „	2	4	..	2 6	1	11	..	2 0
BARKS—								
Canella alba.....per cwt.	15	0	..	28 0	15	0	..	25 0
Cascarilla ..... „	24	0	..	30 0	26	0	..	35 0
Peru, crown & grey per lb.	0	9	..	2 6	1	0	..	2 0
Calisaya, flat „	2	10	..	4 0	3	0	..	3 0
„ quill „	2	8	..	4 0	3	3	..	3 6
Carthagena „	0	9	..	2 0	0	10	..	1 0
E. I. ..... „	1	0	..	5 0	0	0	..	0 0
Pitayo ..... „	0	6	..	2 0	0	4	..	1 0
Red ..... „	1	7	..	3 6	1	10	..	6 0
Buchu Leaves..... „	0	1	..	1 0	0	2	..	1 0
CAMPHOR, China ..per cwt.	85	0	..	86 0	82	6	..	83 0
Japan .. „	87	6	..	90 0	85	0	..	0 0
Refin. Eng. per lb.	1	2½	..	0 0	1	2½	..	0 0
CANTHARIDES..... „	5	6	..	5 9	6	3	..	6 0
CHAMOMILE FLOWERS p. cwt.	20	0	..	66 0	40	0	..	80 0
CASTOREUM .....per lb.	4	0	..	20 0	6	0	..	20 0
DRAGON'S BLOOD, lp. p. cwt.	100	0	..	300 0	102	6	..	240 0
FRUITS AND SEEDS (*see also* Seeds *and* Spices).								
Anise, China Star per cwt.	110	0	..	120 0	120	0	..	127 0
Spanish, &c. „	21	0	..	30 0	17	0	..	42 0
Beans, Tonquin....per lb.	1	6	..	2 5	2	0	..	3 0
Cardamoms, Malabar good ..... „	5	0	..	5 6	5	0	..	6 0
inferior.... „	2	7	..	4 9	3	6	..	4 0
Madras.... „	2	6	..	4 0	2	0	..	4 0
Ceylon .... „	5	0	..	5 6	4	9	..	5 0
Cassia Fistula....per cwt.	10	0	..	20 0	10	0	..	20 0
Castor Seeds .... „	5	0	..	10 0	5	0	..	10 0
Cocculus Indicus „	14	0	..	15 0	12	0	..	14 0
Colocynth, apple ..per lb.	0	4	..	0 10	0	3	..	0 0
Croton Seeds ....per cwt.	52	0	..	53 0	55	0	..	0 0
Cubebs..... „	23	0	..	25 0	23	0	..	24 0
Cummin ..... „	15	0	..	19 0	25	0	..	26 0
Dividivi ..... „	11	0	..	15 0	11	0	..	16 0
Fenugreek ..... „	8	0	..	16 0	9	0	..	10 0
Guinea Grains .. „	25	0	..	26 0	24	0	..	25 0
Juniper Berries „	9	0	..	10 6	16	6	..	17 0
Nux Vomica.. .. „	8	0	..	14 9	10	0	..	13 0
Tamarinds, East India „	10	0	..	18 0	5	0	..	20 0
West India, new „	14	0	..	22 0	20	0	..	31 0
Vanilla, large .... per lb.	68	0	..	80 0	60	0	..	75 0
inferior „	40	0	..	67 0	30	0	..	58 0
Wormseed per cwt.	0	0	..	0 0	0	0	..	0 0
GINGER, Preserved, in bond (duty ½d. per lb.) per lb.	0	7	..	0 10	0	6	..	0 0
GUMS (*see separate list*)								
HONEY Chili .... per cwt.	40	0	..	57 0	30	0	..	40 0
Jamaica „	40	0	..	53 0	30	0	..	45 0
Australian „	35	0	..	45 0	20	0	..	40 0
IPECACUANHA .... per lb.	3	0	..	3 4	3	5	..	3 6
ISINGLASS, Brazil.. „	3	2	..	4 9	3	0	..	4 0
Tongue sort „	3	0	..	5 1	3	4	..	5 0
East India „	2	1	..	5 4	1	6	..	4 0
West India „	4	1	..	4 8	4	3	..	4 0
Russ. long staple	8	6	..	12 6	8	0	..	12 0
„ inferior	4	0	..	8 0	3	6	..	7 0
„ Simovia	3	6	..	5 0	2	6	..	4 0
JALAP, good..... „	1	0	..	1 2	1	8	..	2 0
infer. & stems „	0	10	..	0 11	1	2	..	1 0
LEMON JUICE .... per degree	0	2¾	..	0 0	0	2¾	..	0 0
LIME JUICE.....per gall.	2	6	..	3 0	4	0	..	5 0
LIQUORICE, Spanish per cwt.	40	0	..	70 0	0	0	..	0 0
Liquorice Root „	11	0	..	16 0	19	0	..	20 0
MANNA, flaky .....per lb.	2	6	..	3 0	3	0	..	3 0
small ..... „	1	2	..	1 5	1	6	..	0 0
MUSK, Pod.....per oz.	17	0	..	42 0	19	0	..	40 0
Grain..... „	48	0	..	50 0	55	0	..	58 0
OILS (*see also separate list*)								
Almond, expressed per lb.	0	11	..	0 0	1	0	..	0 0
Castor, 1st pale.... „	0	5¾	..	0 0	0	5½	..	0 0
second .... „	0	5	..	0 5½	0	5¼	..	0 0
infer. & dark „	0	4½	..	0 5	0	4¾	..	0 0
Bombay (in casks)	0	4¾	..	0 0	0	4¾	..	0 0
Cod Liver ..... per gall.	3	9	..	5 0	4	0	..	5 0
Croton ..... per oz.	0	3	..	0 4	0	3	..	0 0
Essential Oils:								
Almond .....per lb.	25	0	..	0 0	30	0	..	0 0
Anise-seed ..... „	9	0	..	9 3	9	0	..	0 0
Bay .....per cwt.	0	0	..	0 0	65	0	..	70 0
Bergamot ..... per lb.	7	6	..	18 0	9	0	..	10 0
Cajeput, (in bond) per oz.	2	3	..	2 5	0	0	..	0 0
Caraway.....per lb.	5	3	..	6 0	5	6	..	6 0
Cassia ..... „	4	9	..	0 0	7	0	..	0 0
Cinnamon .....per oz.	1	0	..	8 0	0	9	..	3 0
Cinnamon-leaf .. „	0	2½	..	0 3	0	3	..	0 0
Citronelle ..... „	0	1¾	..	0 2	0	2¼	..	0 0
Clove .....per lb.	10	0	..	0 0	5	6	..	0 0
Juniper ..... „	1	10	..	2 0	1	3	..	2 0

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sential Oils, *continued*:—	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Lavender .....per lb.	1 10 ..	5 0	2 6 ..	5 6
Lemon ..... ,,	10 0 ..	12 0	12 0 ..	14 6
Lemongrass ....per oz.	0 2⅝ ..	0 2¾	0 3½ ..	0 0
Neroli ..... ,,	0 4 ..	0 6	0 5 ..	0 6
Nutmeg ..... ,,	0 6½ ..	0 8	0 7½ ..	0 8½
Orange.....per lb.	8 0 ..	12 0	7 0 ..	9 0
Otto of Roses....per oz.	15 0 ..	22 0	18 0 ..	25 0
Patchouli ..... ,,	3 6 ..	4 0	3 9 ..	4 0
Peppermint:				
American ....per lb.	20 0 ..	22 0	14 6 ..	15 3
English ..... ,,	29 0 ..	32 0	26 0 ..	28 0
Rosemary ..... ,,	1 4 ..	1 10	1 11 ..	0 0
Sassafras ..... ,,	2 4 ..	3 6	3 0 ..	3 8
Spearmint ..... ,,	6 0 ..	18 0	6 0 ..	20 0
Thyme..... ,,	1 9 ..	2 0	1 10 ..	1 11
nce, expressed ..per oz.	0 3 ..	0 3½	0 1½ ..	0 4
M, Turkey .....per lb.	26 0 ..	28 0	24 0 ..	27 0
inferior ..... ,,	11 0 ..	24 0	12 0 ..	20 0
SSIA(bitter wood)per ton	70 0 ..	100 0	85 0 ..	90 0
BARB, China, good and				
e .....per lb.	3 0 ..	5 0	2 9 ..	6 0
Good, mid. to ord. ,,	0 8 ..	2 9	0 10 ..	2 6
Dutch trimmed ,,	0 0 ..	0 0	8 0 ..	10 0
Russian ..... ,,	0 0 ..	0 0	0 0 ..	0 0
TS—Caimmba..per ewt.	9 0 ..	18 0	15 0 ..	25 0
hina ..... ,,	18 0 ..	24 0	20 0 ..	27 0
alangal..... ,,	25 0 ..	26 0	18 0 ..	22 0
entian ..... ,,	17 0 ..	19 0	18 0 ..	0 0
ellebore ..... ,,	30 0 ..	33 0	30 0 ..	32 0
rris ..... ,,	36 0 ..	80 0	36 0 ..	80 0
llitory..... ,,	38 0 ..	39 0	38 0 ..	39 0
nk .....per lb.	1 0 ..	1 3	0 10 ..	1 3
hatany..... ,,	0 5 ..	0 11	0 6 ..	1 2
ncka..... ,,	4 0 ..	5 0	4 9 ..	0 0
nake ..... ,,	1 8 ..	1 9	1 2 ..	1 3
FRON, Spanish .. ,,	24 0 ..	28 0	22 0 ..	29 0
EP .....per cwt.	170 0 ..	200 0	170 0 ..	180 0
SAPARILLA, Lima per lb.	0 6 ..	0 9	0 6 ..	0 7
ra..... ,,	1 0 ..	1 3	1 3 ..	0 0
onduras ..... ,,	1 2 ..	1 7	1 1 ..	1 8
maica ..... ,,	1 6 ..	2 1	2 2 ..	2 6
SAFRAS .....per cwt.	13 0 ..	16 0	0 0 ..	0 0
MMONY, Virgin ..per lb.	25 0 ..	30 0	26 0 ..	31 0
cond & ordinary ,,	8 0 ..	24 0	14 0 ..	25 0
NA, Bombay .... ,,	0 1 ..	0 5	0 2 ..	0 5
nnivelly ..... ,,	0 2 ..	1 0	0 1⅝ ..	0 10
lexandria..... ,,	0 3½ ..	1 5	0 2½ ..	1 0
RMACETI, refined ,,	1 3 ..	1 4	1 6 ..	0 0
merican ..... ,,	1 0 ..	1 1	1 2 ..	1 3
ILLS ..... ,,	0 1½ ..	0 2	0 1¼ ..	0 2
MS.				
MONIACI drop .. per ewt.	85 0 ..	107 6	85 0 ..	130 0
lump.. ,,	45 0 ..	80 0	60 0 ..	80 0
MI, fine washed ,,	240 0 ..	260 0	250 0 ..	320 0
bold scraped ,,	220 0 ..	225 0	230 0 ..	240 0
sorts ..... ,,	120 0 ..	230 0	130 0 ..	230 0
dark ..... ,,	75 0 ..	110 0	90 0 ..	120 0
NIC, E.I., fine ,,	60 0 ..	77 0	65 0 ..	78 0
pale picked .. ,,	70 0 ..	78 0	75 0 ..	84 0
srts.,gd.to fin. ,,	40 0 ..	58 0	55 0 ..	69 0
garblings .. ,,	20 0 ..	46 0	20 0 ..	45 0
KEY,pick.gd.to fin. ,,	150 0 ..	220 0	160 0 ..	230 0
second & inf. ,,	80 0 ..	145 0	85 0 ..	150 0
in sorts .. ,,	45 0 ..	75 0	0 0 ..	0 0
Gedda .... ,,	21 0 ..	35 0	25 0 ..	42 0
RBARY, white .. ,,	26 0 ..	43 0	50 0 ..	57 0
brown .. ,,	25 0 ..	36 0	37 0 ..	42 0
TRALIAN..... ,,	28 0 ..	47 0	27 0 ..	45 0
AFŒTIDA.cm.to gd. ,,	30 0 ..	52 0	45 0 ..	100 0
JAMIN, 1st qual. ,,	200 0 ..	520 0	160 0 ..	400 0
2nd ,, ,,	150 0 ..	240 0	140 0 ..	210 0
3rd ,, ,,	70 0 ..	92 6	60 0 ..	80 0
AL, Anglo red ,,	112 6 ..	117 6	130 0 ..	140 0
Bengnela ,,	105 0 ..	110 0	110 0 ..	115 0
Sierra Leone, per lb.	0 4½ ..	0 10½	0 3½ ..	0 10
Manilla....per ewt.	18 0 ..	23 0	13 0 ..	30 0
MMAR, pale .... ,,	46 0 ..	50 0	48 0 ..	50 0
PHORIUM .... ,,	11 0 ..	15 0	12 0 ..	15 0
LBANUM ..... per lb.	1 6 ..	2 0	0 0 ..	0 0
MBOGE,pckd.pipe per cwt.	200 0 ..	280 0	250 0 ..	285 6
AIACUM .....per lb.	0 9 ..	2 10	0 8 ..	2 6
NO.....per cwt.	60 0 ..	90 0	50 0 ..	85 0
WRIE, rough .. ,,	20 0 ..	32 0	18 0 ..	24 0
scraped sorts ,,	34 0 ..	52 6	25 0 ..	35 0
STIC, picked ....per lb.	4 6 ..	6 0	6 0 ..	7 0
RRH, gd. & fine per cwt.	119 0 ..	250 0	125 0 ..	240 0
sorts .... ,,	79 0 ..	115 0	70 0 ..	120 0
IBANUM, p. srts ,,	68 0 ..	73 0	66 0 ..	72 0
amber & ylw. ,,	60 0 ..	67 6	60 0 ..	65 0
garblings.... ,,	22 0 ..	37 0	20 0 ..	40 0
EGAL ..... ,,	60 0 ..	63 0	60 0 ..	100 0
NDABAC..... ,,	70 0 ..	105 0	60 0 ..	95 0
ELLAC, Orange.. ,,	255 0 ..	295 0	182 6 ..	197 6
Liver .. ,,	235 0 ..	250 0	170 0 ..	180 0
US ..... ,,	22 0 ..	25 0	36 0 ..	38 0
AGACANTH, leaf ,,	200 0 ..	400 0	270 0 ..	440 0
in orts ,,	30 0 ..	150 0	70 0 ..	180 0
LS.	£ *s.*	£ *s.*	£ *s.*	£ *s.*
AL, pale .....per tun	37 0 ..	0 0	40 0 ..	0 0
yellow to tinged ,,	32 0 ..	36 0	37 0 ..	39 0
brown ..... ,,	30 0 ..	32 0	33 0 ..	0 0
ERM..... ,,	105 0 ..	0 0	0 0 ..	0 0
D ..... ,,	35 10 ..	36 0	38 10 ..	0 0

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Oils, *continued*:—	£ *s.*	£ *s.*	£ *s.*	£ *s.*
WHALE,SouthSea,pale,per tun	33 0 to	0 0	39 0 to	10 0
yellow ,,	32 0 ..	32 10	37 0 ..	38 0
brown ,,	30 0 ..	31 0	34 0 ..	35 0
East India, Fish ,,	26 0 ..	0 0	28 0 ..	0 0
OLIVE, Gallipoli ...per ton	46 0 ..	0 0	43 0 ..	0 0
Trieste..... ,,	44 0 ..	0 0	41 0 ..	0 0
Levant .... ,,	40 0 ..	0 0	39 0 ..	0 0
Mogador .... ,,	39 0 ..	0 0	38 0 ..	38 10
Spanish .... ,,	41 10 ..	0 0	40 0 ..	0 0
Sicily ..... ,,	41 0 ..	0 0	40 0 ..	0 0
COCOANUT, Cochin.. ,,	38 0 ..	39 0	39 0 ..	40 0
Ceylon ,,	35 0 ..	0 0	35 0 ..	35 10
Sydney ,,	31 0 ..	35 0	28 0 ..	33 0
GROUND NUT AND GINGELLY:				
Bombay	0 0 ..	0 0	0 0 ..	0 0
Madras	36 0 ..	0 0	35 10 ..	0 0
PALM, fine.....	35 0 ..	35 10	39 0 ..	0 0
LINSEED	28 15 ..	0 0	33 0 ..	33 5
RAPESEED, English, pale ..	32 5 ..	0 0	37 0 ..	0 0
brown	30 0 ..	30 5	34 10 ..	34 15
Foreign, pale ..	0 0 ..	0 0	38 0 ..	0 0
brown	0 0 ..	0 0	0 0 ..	0 0
COTTONSEED	25 0 ..	25 5	28 10 ..	29 0
LARD	47 10 ..	0 0	44 10 ..	46 0
TALLOW	27 0 ..	34 0	31 0 ..	0 0
TURPENTINE, American,eks.	32 9 ..	33 0	44 0 ..	0 0
French ,,	32 6 ..	0 0	43 0 ..	0 0
PETROLEUM, Crude	0 0 ..	0 0	0 0 ..	0 0
	s. d.	*s. d.*	*s. d.*	*s. d.*
refined, per gall.	0 10¼ ..	0 11¾	1 3 ..	1 4
Spirit ,,	0 10 ..	0 0	1 2½ ..	0 0
SEEDS.				
CANARY.....per qr.	60 0 ..	66 0	46 0 ..	50 0
CARAWAY, English per ewt.	0 0 ..	0 0	40 0 ..	44 0
German, &c....	26 0 ..	36 0	22 0 ..	36 0
CORIANDER	8 0 ..	16 0	12 0 ..	16 0
HEMP.....per qr.	40 0 ..	44 0	40 0 ..	44 0
LINSEED, English per qr. ..	66 0 ..	70 0	0 0 ..	0 0
Black Sea & Azof	59 0 ..	62 0	61 6 ..	62 0
Calcutta ,,	61 0 ..	63 0	66 0 ..	0 0
Bombay ,,	63 6 ..	65 0	64 6 ..	0 0
St. Petrsbrg.,,	56 0 ..	58 0	60 0 ..	60 6
Mustard, brown..per bshl.	10 6 ..	15 6	13 0 ..	16 0
white.. ,,	8 0 ..	11 0	8 0 ..	9 0
POPPY, East India, per qr.	56 0 ..	58 0	71 0 ..	72 6
SPICES.				
CASSIA LIGNEA ..per ewt.	67 0 ..	75 0	80 0 ..	85 0
Vera ..... ,,	24 0 ..	60 0	27 0 ..	60 0
Buds ..... ,,	115 0 ..	117 6	117 6 ..	122 6
CINNAMON, Ceylon:				
1st quality .....per lb.	2 4 ..	3 10	2 3 ..	3 8
2nd do. ..... ,,	2 0 ..	3 3	1 9 ..	3 4
3rd do. ..... ,,	1 6 ..	2 10	1 5 ..	3 0
Tellicherry ..... ,,	0 0 ..	0 0	2 8 ..	3 1
CLOVES, Penang .... ,,	1 8 ..	0 0	1 4 ..	1 5
Amboyna ..... ,,	1 3 ..	1 3½	0 6½ ..	0 11
Zanzibar..... ,,	1 3 ..	0 0	0 8 ..	0 8½
GINGER, Jam., fine per cwt.	110 0 ..	252 0	110 0 ..	200 0
Ord. to good .... ,,	64 0 ..	105 0	56 0 ..	100 0
African ..... ,,	50 0 ..	0 0	48 0 ..	0 0
Bengal..... ,,	48 0 ..	56 0	45 0 ..	0 0
Malabar ..... ,,	47 6 ..	0 0	44 0 ..	0 0
Cochin ..... ,,	68 0 ..	115 0	53 0 ..	130 0
PEPPER,Blk,Malabar,per lb.	0 7⅛ ..	0 7⅝	0 7½ ..	0 0
Singapore ..... ,,	0 6 ..	0 6⅛	0 7 ..	0 0
White Tellicherry ,,	1 9 ..	1 10	0 0 ..	0 0
Cayenne ..... ,,	1 4 ..	1 10	1 0 ..	1 6
MACE, 1st quality .. ,,	3 3 ..	3 10	3 9 ..	4 1
2nd and inferior .. ,,	2 4 ..	3 2	3 1 ..	3 8
NUTMEGS, 78 to 60 to lb.	3 7 ..	4 7	3 6 ..	4 2
90 to 80 ,,	3 5 ..	3 6	2 10 ..	3 0
132 to 95 ,,	2 11 ..	3 4	2 3 ..	2 9
PIMENTA.....	0 3 ..	0 3⅛	0 3 ..	0 0
VARIOUS PRODUCTS.				
COCHINEAL—				
Honduras, black ..per lb.	2 1 ..	3 0	2 4 ..	3 4
,, silver .. ,,	2 1 ..	2 4	2 3 ..	2 6
,, pasty .. ,,	1 9 ..	2 0	2 0 ..	2 2
Mexican, black .... ,,	2 2 ..	2 4	2 5 ..	2 9
,, silver.... ,,	1 11 ..	2 0	2 3 ..	0 0
Teneriffe, black .. ,,	2 1 ..	3 10	2 4 ..	4 2
,, silver .. ,,	2 0 ..	2 2½	2 3 ..	2 5
PUMICE STONE ..per ton	120 0 ..	150 0	120 0 ..	150 0
SOAP, Castile.....per cwt.	33 0 ..	34 0	33 0 ..	34 0
SPONGE,Turk.fin.pkd pr lb.	12 0 ..	16 0	12 0 ..	16 0
Fair to good ,,	4 0 ..	11 0	4 0 ..	11 0
Ordinary .. ,,	1 0 ..	3	1 0 ..	3 6
Bahama .... ,,	0 6 ..	3 6	0 6 ..	2 6
TERRA JAPONICA—				
Gambier .....per cwt.	25 0 ..	0 0	24 9 ..	25 0
Free cubes .... ,,	33 0 ..	37 0	29 0 ..	33 6
Cutch ..... ,,	21 0 ..	21 9	22 6 ..	23 3
WOOD, DYE, Bar ..per ton	£3 17/6 ..	£4 0	£4 5 ..	£4 10
Brazil, Branch .... ,,	20 0 ..	26 0	27 0 ..	30 0
,, Logs ..... ,,	9 0 ..	18 0	9 0 ..	16 0
Cam..... ,,	21 0 ..	30 0	15 0 ..	25 0
Fustic, Cuba ..... ,,	9 0 ..	9 5	8 5 ..	9 10
Jamaica ..... ,,	6 5 ..	7 5	6 6 ..	6 11
LOGWOOD,Campeachy,,	8 10 ..	9 10	8 2 6 ..	9 0
Honduras ..... ,,	6 10 ..	6 15	6 5 ..	6 12 6
St. Domingo .... ,,	5 15 ..	6 0	5 0 ..	5 15
Jamaica ..... ,,	5 2,6 ..	5 10	5 2 6 ..	5 5
LIMA, first pile .... ,,	13 10 ..	11 10	9 10 ..	11 5
RED SANDERS .... ,,	6 12,6 ..	7 5	6 10 ..	0 0

NOTE BOOK AND QUERIES

In reply to last month's queries :—*C.* gives us the following formula for a Teething Powder, which he says he has found very generally approved :—

℞ Calomel, gr. ½.
Antim. Pulv. Comp., gr. lj.
P. Ipecac. Comp., gr. i.

M. Dose for a child under six months half a powder, above that age a whole powder.

W. F. G. sends us what he has found to be "A Good Teething Powder":—

℞ Calomel 3xiij. ℈i.
Sacchar. Alb. 3xxvj. ℈ij.
Pulv. Opii, ℈ij.

M. Dose : gr. iij to gr. vi.

Each powder of six grains contains $\frac{1}{16}$th grain of Opium.

W. H. D. informs *J. F. R.* that a work on Disinfectants by Dr. Angus Smith, is published by Edmonston & Douglas, Edinburgh, price *5s.*

C. T. gives us the next two items :—

"Tamarind Cough Elixir" : Boil gently half a pound of West Indian Tamarinds in a pint of distilled water for half an hour. Cool and strain, make up with more distilled water to the bulk of a pint, and add :—

Acet. Scillæ., 3x.
Acid. Acet. Dil., 3iv.
Tinct. Camph. Co.
Æther. Chlor. āā. ℥ijss.

M. A teaspoonful for a dose.

"Shoemaker's Ink" is simply the thick residue which is always found at the bottom of the cask or other vessel in which ordinary black writing ink is stored.

A Student.—Iodine is found most abundantly in the sea-weed, or kelp, collected on the coasts of Scotland and Ireland. In the months from June to September the weed is cut, spread out on the shore to dry, and then burnt in kilns. When most of the carbonaceous matter is burnt off the ash is raked together ; it then fuses and forms a cake at the bottom of the kiln, technically called a "floor." The best varieties of kelp yield from 10 to 15 lbs. of iodine per ton. Mr. Stanford has improved the process of incineration by drying the weeds under cover, compressing them into cakes by hydraulic pressure, and then heating them in iron retorts. A considerable quantity of gas is evolved, which is collected and utilized as a source of heat, and a quantity of ammonia is formed at the same time. The iodides, which are all left in the charcoal in the retort, are then extracted by lixiviation with water.

C. F. R.—We cannot recommend you a better work than Tomes' "Manual of Dentistry," published by Churchill, price 12*s.* 6*d.* It contains an excellent chapter on the various compositions for filling teeth. The best dentists seem agreed that no stopping on the whole is equal to gold leaf, or what is known as "crystal gold." But Mr. Tomes declines to be led away by the somewhat wild outcry against amalgams of every kind. He gives a number of formulæ.

An Old Pharmacist.—It would be illegal for an unregistered person to style himself an operative or manufacturing or wholesale chemist and druggist, unless he were *bonâ fide* such. The Pharmacy Act does not interfere with wholesale dealing in poisons, but a wholesale druggist, not being a registered chemist and druggist, would render himself liable to penalties so soon as he kept an open shop for retailing, dispensing, or compounding poisons. The easiest way to evade the Act, it would seem, would be to open a "Co-operative Store" ; then, by employing a qualified assistant and labeling poisons in his name, the difficulty seems to be surmounted.

Decisio.—Which is correct, "I beg to offer myself *a candidate* for the vacancy," or "I beg to offer myself *as a candidate* for the vacancy?" This question it seems has agitated a certain pharmaceutical circle in the Midlands. Our own opinion is that the second is unquestionably the correct form of expression ; the first, according to analogous sentences, would seem to imply that I offer a candidate *to* myself.

M. H.—The Patent Office is in Southampton Buildings, Chancery Lane. Any one not perfectly conversant with the mode of procedure will probably save money in the end by consulting a respectable patent agent.

C. J. H. (1).—Citric and tartaric acids should give no precipitate when hydrogen sulphide is passed through their aqueous solution. They should leave no ash on ignition ; if any remain it is due to mineral matter. They should give no precipitates with solutions of lime, barium chloride, or ammonium oxalate. Citric acid may be adulterated with tartaric acid, in which case it will give a precipitate, with potassium acetate.

Oil of lemons should possess an agreeable odour, *sui generis*, and not have a smell of turpentine. Its specific gravity should not exceed ·851, and if of the finest quality it will not deposit by keeping. Adulteration by a fixed oil may be detected by allowing a drop to fall on a sheet of clean white paper and then gently warming. If a greasy spot remains, the specimen is impure.

(2).—Simple syrup is prepared by dissolving refined sugar in half its weight of distilled water, using a gentle heat, and making up the product to the original weight with more distilled water.

U. T.—We believe that the worm powders you mention consist of powdered areca nuts. You will find this to be an excellent vermifuge. The dose for a moderate sized dog is about a drachm ; it may be made into a bolus with lard or butter. One pill should be given every night, and on the third morning a good dose of castor oil.

Erratum.—Page 109, lines 20 and 21 from bottom, *for* grains *read* grams.

Subscriber.—Can anyone give me a recipe for making a waterproof and pliable cement for cementing woollen cloth together. Have tried india-rubber and gutta percha dissolved in bisulphide of carbon, but it is not satisfactory.

Ratæ.—Use plaster of Paris with sufficient water to make it into a pasty mass.

Poor Jack.—Until we have better evidence of the bad treatment of chemists' assistants generally, we must decline to make our columns the medium of ventilating what, as it seems to us, is only an imaginary "burning question."

Ammonia.—The liquor ammoniæ of the B. P. (that is 1 part of liq. ammon. fort. and 2 parts of distilled water) is, without any further admixture, the universal substitute for the Liq. Vol. C. C. of old pharmacopœias.

A Young Apprentice.—India-rubber bottles which have become hard from age can be rendered pliable (unless they are hopelessly injured) by immersing for a short time in moderately warm, but not hot, water, and afterwards smearing with glycerine. The addition of a coat of olive oil will improve their appearance. Smelling salts should be made with carbonate, not with sesquicarbonate, of ammonia, the former being more durable. The following is one of many formulæ, the difference lying in the kinds and quantities of the essential oils, which can be varied according to fancy. Ammon. carb. 1 lb., ol. lavand. ℥ij., ol. bergam., ol. lemon, āā ℥j., rub together and sublime. A more ready method is to take bruised ammon. carb. (or sesquicarb.) and add to it a few drops of a volatile ammoniacal essence when the bottles are filled. The latter consists of strong liquid ammonia with essential oils in varying proportions.

Will some one kindly inform *J. S.* if a key to the "First Book of Cæsar" is published, and if so, by whom ?

A. M. Z. wants "a machine for mixing horse and cattle powders, and also for horse ball," and does not see one advertised in our pages. We suppose he wants something different to a pestle and mortar. Can anyone help him ?

Title and publisher of the best work on separating the precious metals from quartz is wanted by *J. W.* ; and *J. T. S.* would like to hear of a good work on "Cows and their Management."

Analyst.—We think the following method will enable you to estimate the proportion of paraffine in stearin candles :—Take 5 grains of the sample, and treat with a boiling solution of caustic potash. By this means the stearin is saponified, the paraffine remaining suspended in the liquid. The soap is then precipitated with the aid of sodium chloride, the paraffine being carried down with it. The mixture is thrown on a filter, and thoroughly washed with water or weak spirit. The paraffine which remains is then freed from water by washing with ether, transferred to a platinum capsule, dried, and weighed.

Dens.—You can prepare the white variety of gutta percha by digesting fragments of the ordinary form in chloroform for a few days. The solution is filtered and an equal bulk of alcohol added, when the gutta percha separates as a white bulky mass.

Edinburgh.—The Scotch word "hale" is doubtless derived from the German *heilig*, and it is curious to note that this latter stands both for "holy" and "healthy," two conditions which it would seem difficult to reconcile in these ascetic days. We think it was H. W. Beecher who said "Cleanliness may be next to godliness, but they are often very distant neighbours."

R. D.—Lavoisier was the first to establish a clear idea as to the process of respiration, although the theory by which he explained the action of oxygen was afterwards considerably modified. It has been now proved that the power of absorbing oxygen lies not in the serum of the blood at all, but in the corpuscles. These contain a crystalline substance, which in its unaltered state has a purple colour, and is called *hæmoglobin*. When brought into contact with oxygen it absorbs some of the gas, and becomes changed from purple to red ; it is then called *oxyhæmoglobin*. In the course of circulation from the lungs it gradually parts with its oxygen, and returns with its original purple colour. In asphyxiated animals both the air in the lungs and in the blood is devoid of oxygen, has a rich purple colour, and is found to contain only *hæmoglobin*.